

# **Second Quarter 2005 Groundwater Monitoring and Remediation System O&M Report**

**Blue Lake Belting and Leather Works  
Case No. 12012**

Prepared for:

**Blue Lake Belting and Leather Works**

 **Consulting Engineers & Geologists, Inc.**

**812 W. Wabash Ave.  
Eureka, CA 95501-2138  
707/441-8855**

**July 2005  
097309**



**CONSULTING ENGINEERS & GEOLOGISTS, INC.**

812 W. Webash • Eureka, CA 95501-2138 • 707-441-8855 • Fax 707-441-8877 • info@shn-eureka.com

Reference: 097309

July 27, 2005

Mr. Mark Verhey  
Humboldt County Division of Environmental Health  
100 H Street, Suite 100  
Eureka, CA 95501

**Subject: Second Quarter 2005 Groundwater Monitoring and Remediation System O&M Report, Blue Lake Belting and Leather Works, 411 Railroad Avenue, Blue Lake, California; Case No. 12012**

Dear Mr. Verhey:

The attached report presents the results of groundwater monitoring and remediation system operation and maintenance activities conducted during the second quarter 2005, at the Blue Lake Belting and Leather Works. Quarterly monitoring of wells MW-101 through MW-106, and LACO Associates well MW-3, occurred at the site on June 1, 2005. SHN Consulting Engineers & Geologists, Inc. (SHN) performed this work on behalf of Blue Lake Belting and Leather Works. Site monitoring activities coincide with site monitoring at the Blue Lake Market, conducted by LACO Associates during the second quarter 2005.

Please call me at 707-441-8855 if you have any questions.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

A handwritten signature in black ink that appears to read "Mike Fogel".

*for*  
Mike Fogel, P.E.  
Senior Project Engineer

MKF/ADM:med

Enclosure: 2<sup>nd</sup> Quarter 2005 Monitoring Report

copy w/encl: Chuck Huntzinger, BLB&LW

Reference: 097309

**Second Quarter 2005  
Groundwater Monitoring and Remediation  
System O&M Report**

**Blue Lake Belting and Leather Works  
Case No. 12012**

Prepared for:

**Blue Lake Belting and Leather Works**

  
Consulting Engineers & Geologists, Inc.  
812 West Wabash Avenue  
Eureka, CA 95501-2138  
707-441-8855

July 2005



QA/QC: MKF\_\_\_\_

# Table of Contents

	Page
1.0      Introduction.....	1
1.1     Background .....	1
1.2     Previous Site Activities.....	1
2.0      Field Activities .....	2
2.1     Monitoring Well Sampling.....	2
2.2     Laboratory Analysis.....	2
2.3     Equipment Decontamination Procedures.....	2
2.4     Investigation-Derived Waste Management.....	3
3.0      Groundwater Monitoring Results.....	3
3.1     Hydrogeology .....	3
3.2     Groundwater Analytical Results.....	3
3.3     Natural Attenuation Parameters.....	4
4.0      Remediation System Operation & Maintenance.....	5
5.0      Discussion and Recommendations .....	5
6.0      References Cited .....	6

## Appendices

- A.      Field Notes
- B.      Historic Monitoring Data
- C.      Laboratory Analytical Reports

## List of Illustrations

Figures	Follows Page
1.      Site Location Map.....	1
2.      Site Plan.....	1
3.      Groundwater Contours, June 1, 2005 .....	3
4.      Summary of Groundwater Analytical Results, June 1, 2005 .....	4
5.      Total Petroleum Hydrocarbons as Gasoline and Benzene Concentrations Over Time for Monitoring Well MW-104 .....	on page 6

Tables	Page
1.      Groundwater Elevations, June 1, 2005.....	3
2.      Groundwater Analytical Results, June 1, 2005.....	4
3.      DO, DCO <sub>2</sub> , and ORP Measurement Results, June 1, 2005 .....	5

## **Abbreviations and Acronyms**

<	denotes a value that is “less than” the method detection limit
kWhr	kilowatt hour
mg/L	milligrams per Liter
mg/L CaCO <sub>3</sub>	milligrams per Liter of Calcium Carbonate
mV	millivolts
ppm	parts per million
psi	pounds per square inch
scfh	standard cubic feet per hour
ug/L	micrograms per Liter

BLB&LW	Blue Lake Belting and Leather Works
BTEX	Benzene, Toluene, Ethylbenzene, and total Xylenes
DCO <sub>2</sub>	Dissolved Carbon Dioxide
DIPE	Diisopropyl Ether
DO	Dissolved Oxygen
EC	Electrical Conductivity
EPA	U.S. Environmental Protection Agency
ETBE	Ethyl Tertiary-Butyl Ether
HCDEH	Humboldt County Division of Environmental Health
LACO	LACO Associates
MTBE	Methyl Tertiary-Butyl Ether
MW-#	Monitoring Well-#
NA	Not Analyzed/Not Applicable/Not Available
NS	Not Sampled
ORP	Oxidation-Reduction Potential
SHN	SHN Consulting Engineers & Geologists, Inc.
SW-#	Sparge Well-#
TAME	Tertiary-Amyl Methyl Ether
TBA	Tertiary-Butyl Alcohol
TOC	Top of Casing
TPHG	Total Petroleum Hydrocarbons as Gasoline
UST	Underground Storage Tank

# **1.0 Introduction**

This report presents the results of groundwater monitoring activities completed during the second quarter of 2005 at the Blue Lake Belting and Leather Works (BLB&LW). The site is located at 411 Railroad Avenue in Blue Lake, California (Figure 1). SHN Consulting Engineers & Geologists, Inc. (SHN) conducted the quarterly groundwater-monitoring event on June 1, 2005.

## **1.1 Background**

The BLB&LW parcel (Figure 2) was previously utilized as an automobile service station with three underground fuel storage tanks located on site:

- One 650-gallon gasoline Underground Storage Tank (UST) is located beneath the floor of what is presently the BLB&LW shop area.
- One 1,000-gallon UST was located in the sidewalk along G Street.
- One 750-gallon UST was previously located along the fueling island (Subsurface Investigation Work Plan, Blue Lake Market, LACO, April 1992).

The 650-gallon UST passed a pressure test conducted by Precision Tank Testing Company, and, under approval from the Humboldt County Division of Environmental Health (HCDEH), was abandoned in place and subsequently filled with concrete. This tank has since received regulatory closure and is not a part of the current site investigation.

## **1.2 Previous Site Activities**

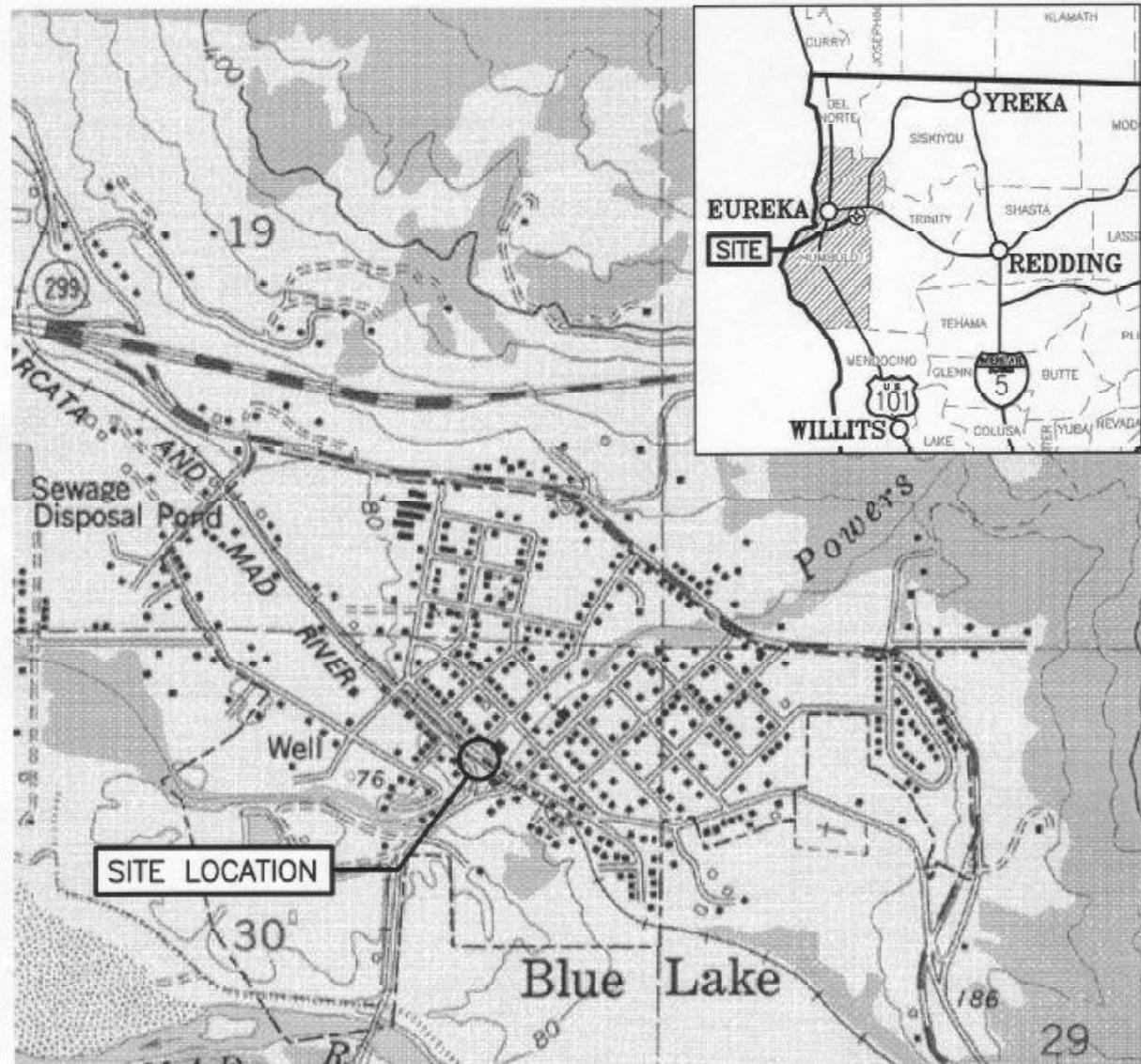
In January 1995, soil samples collected adjacent to the location of the former USTs indicated the presence of petroleum hydrocarbon constituents in soil. Subsequent site investigations and quarterly groundwater monitoring conducted at BLB&LW indicated that elevated levels of petroleum hydrocarbons were present in soil and groundwater in the vicinity of monitoring wells MW-103, MW-104, and MW-105 (SHN, 2000).

Since groundwater monitoring commenced in 1999, Methyl Tertiary-Butyl Ether (MTBE) has not been detected in any of the groundwater samples submitted for laboratory analysis. In addition, the former USTs were taken out of service prior to the time at which MTBE was commonly utilized in motor fuel. As such, laboratory analysis for this constituent was discontinued after the third quarter 2003 groundwater-monitoring event was completed.

In August 2003, SHN conducted an air sparge pilot test at the site. Based on the results of the pilot test, SHN recommended that an ozone sparge system be installed to remediate petroleum hydrocarbons in groundwater at the site (SHN, 2003).

In July 2004, SHN installed nine ozone sparge wells, and the construction of the system has been completed. The ozone sparge system became operational on December 21, 2004.

SHN is continuing quarterly groundwater monitoring in wells MW-101 through MW-106. Additionally, since the first quarter of 2005, SHN has assumed quarterly groundwater monitoring

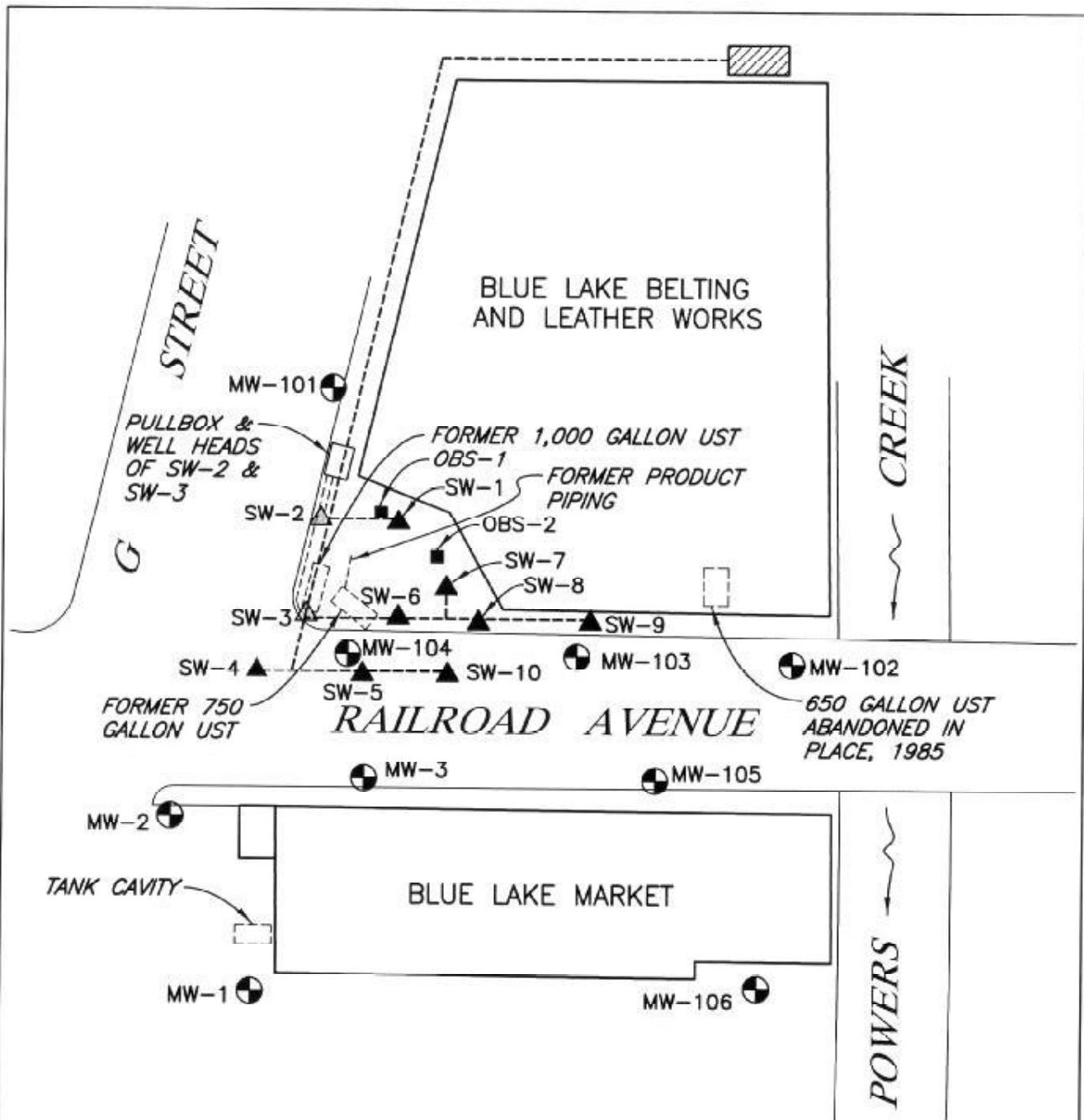


SOURCE: BLUE LAKE  
USGS 7.5 MINUTE  
QUADRANGLE

1"=1000' $\pm$

 Consulting Engineers & Geologists, Inc.	Blue Lake Belting and Leather Works Blue Lake, California	Site Location Map SHN 097309
	JUNE 2003	097309-LOCATION

Figure 1



for LACO well MW-3. These wells are monitored for Total Petroleum Hydrocarbons as Gasoline (TPHG), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and select field measured indicators of bioremediation.

## 2.0 Field Activities

As part of the groundwater-monitoring program, monitoring wells MW-101 through MW-106 and LACO well MW-3 were purged and sampled at the BLB&LW site. All work was conducted in accordance with the approved work plan and site safety plan developed for this project.

Monitoring activities at the site are coordinated in conjunction with the current groundwater investigation at the nearby Blue Lake Market site, performed by LACO Associates (LACO) (wells MW-1 and MW-2, Figure 2). LACO performed groundwater monitoring at the Blue Lake Market in conjunction with the current investigation at the BLB&LW during the second quarter 2005, and that information is included in this report.

### 2.1 Monitoring Well Sampling

On June 1, 2005, SHN conducted quarterly groundwater monitoring of wells MW-101 through MW-106 and LACO well MW-3. Prior to purging, each groundwater monitoring well was measured for depth to water, checked for the presence of floating product, and monitored for Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP), and Dissolved Carbon Dioxide (DCO<sub>2</sub>). DO and ORP were measured using portable instrumentation, and DCO<sub>2</sub> was measured using a field test kit.

Purging operations included bailing three casing volumes of water from each monitoring well. During purging, each well was monitored for Electrical Conductivity (EC), temperature, and pH using portable instrumentation. Each groundwater sample was collected using disposable polyethylene bailers and transferred into laboratory-supplied containers. The water samples were then labeled, stored in an iced cooler, and transported to the laboratory under proper chain-of-custody documentation. Field notes from the June 2005 groundwater-monitoring event are included in Appendix A.

### 2.2 Laboratory Analysis

All of the groundwater samples collected by SHN during the second quarter 2005 monitoring event were analyzed for the following:

- TPHG in accordance with U.S. Environmental Protection Agency (EPA) Method No. 5030/GCFID/8015B.
- BTEX in accordance with EPA Method No. 5030/8021B.

North Coast Laboratories Ltd., a State of California-certified laboratory located in Arcata, California, conducted all analyses.

### 2.3 Equipment Decontamination Procedures

All monitoring and sampling equipment was cleaned prior to being transported to the site and prior to purging each well. All small equipment was cleaned using the triple wash system. The equipment was initially washed in a water solution containing Liquinox® cleaner, followed by a distilled water rinse, then by a second distilled water rinse.

## 2.4 Investigation-Derived Waste Management

All rinse water used for decontaminating field sampling equipment and well purge water was contained in 50-gallon plastic drums. The water was then transported to the SHN purge water storage tank located at 812 West Wabash Avenue in Eureka, California, for temporary storage. Approximately 79 gallons of water were generated during the June 1, 2005, monitoring event, and was discharged, under permit, to the City of Eureka Municipal Sewer System. A discharge receipt for the 74 gallons of water generated during the first quarter 2005 monitoring event and 79 gallons for the second quarter monitoring event are included in Appendix A.

## 3.0 Groundwater Monitoring Results

### 3.1 Hydrogeology

SHN collected depth to water measurements in the BLB&LW monitoring wells on June 1, 2005. These measurements are shown in Table 1. On the same day, LACO collected depth to water measurements from Blue Lake Market wells MW-1 and MW-2, which are located adjacent to BLB&LW site. The Top of Casing (TOC) elevation for each well was surveyed relative to the TOC elevation for Blue Lake Market well MW-1. During this monitoring event, groundwater flow beneath the BLB&LW site was to the south with an approximate gradient of 0.008. The groundwater elevation contours on June 1, 2005 are shown on Figure 3. Historic groundwater elevation data are presented in Appendix B, Table B-1.

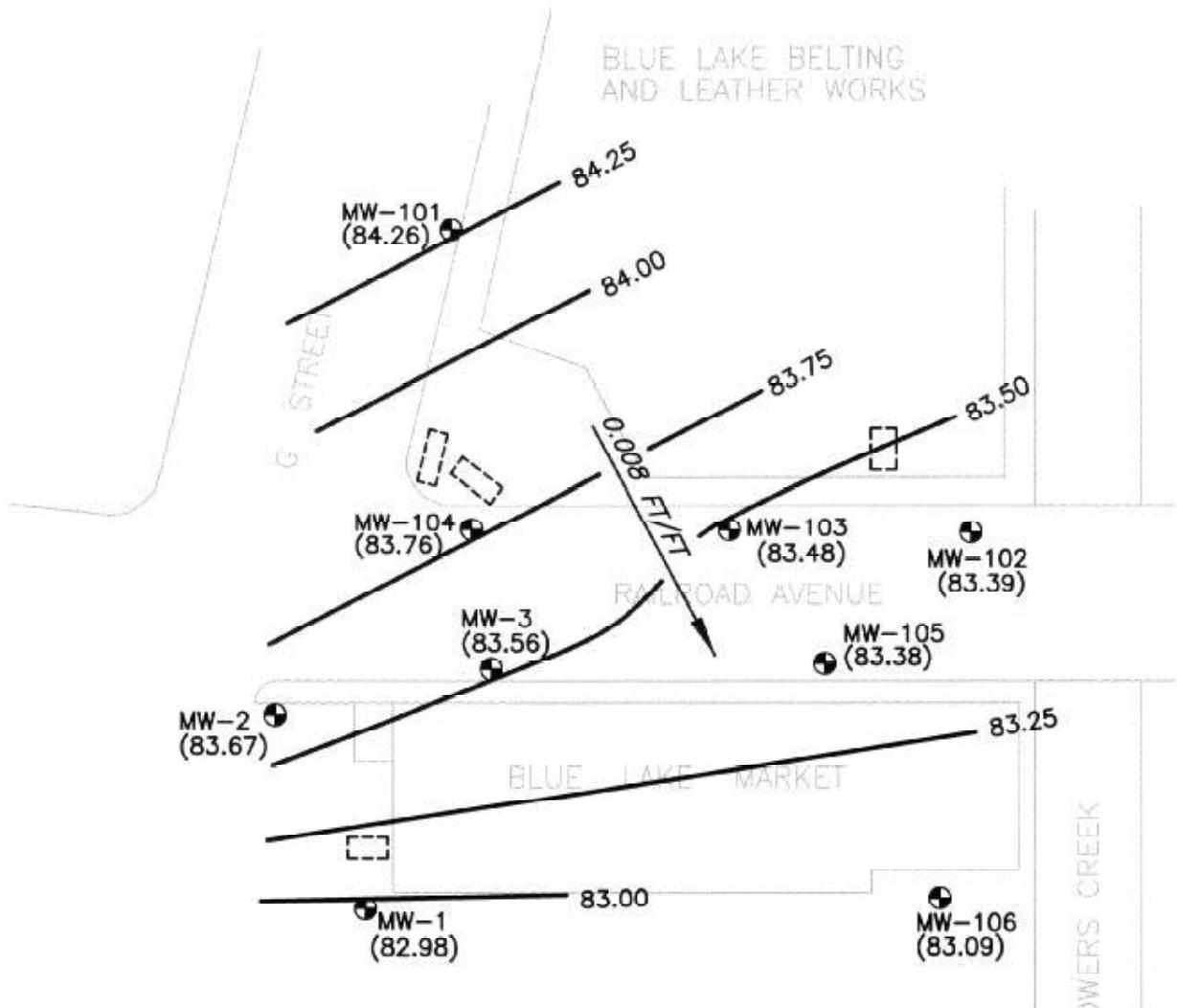
**Table 1**  
**Groundwater Elevations, June 1, 2005**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Sample Location	Top of Casing Elevation <sup>1</sup> (feet)	Depth to Water <sup>2</sup> (feet)	Groundwater Elevation <sup>1</sup> (feet)
MW-101	92.27	8.01	84.26
MW-102	91.19	7.80	83.39
MW-103	91.57	8.09	83.48
MW-104	91.48	7.72	83.76
MW-105	91.32	7.94	83.38
MW-106	88.88	5.79	83.09
MW-1 <sup>3</sup>	89.45	6.47	82.98
MW-2 <sup>3</sup>	91.29	7.62	83.67
MW-3	91.63	8.07	83.56

1. All wells referenced to relative top of casing of Blue Lake Market well MW-1  
2. Below top of casing  
3. Blue Lake Market Wells MW-1 and MW-2 were gauged by LACO.

### 3.2 Groundwater Analytical Results

The laboratory analytical results from the groundwater samples collected on June 1, 2005, from the BLB&LW groundwater monitoring wells and Blue Lake Market wells are summarized in Table 2. TPHG was detected in the groundwater samples from monitoring wells MW-103, MW-104,



### EXPLANATION

- MW-1 MONITORING WELL LOCATION AND DESIGNATION
- [ ] FORMER UST LOCATION
- (83.56) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- 83.50 GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION

 Consulting Engineers & Geologists, Inc.	Blue Lake Belting and Leather Works Blue Lake, California	Groundwater Contours June 1, 2005 SHN 097309
June, 2005	097309-GWC-june-05	Figure 3

MW-105, and LACO wells MW-1, MW-2, and MW-3 at concentrations ranging from 510 micrograms per liter (ug/L) to 13,000 ug/L. Petroleum hydrocarbons were not detected in monitoring wells MW-101, MW-102, and MW-106.

**Table 2**  
**Groundwater Analytical Results, June 1, 2005**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

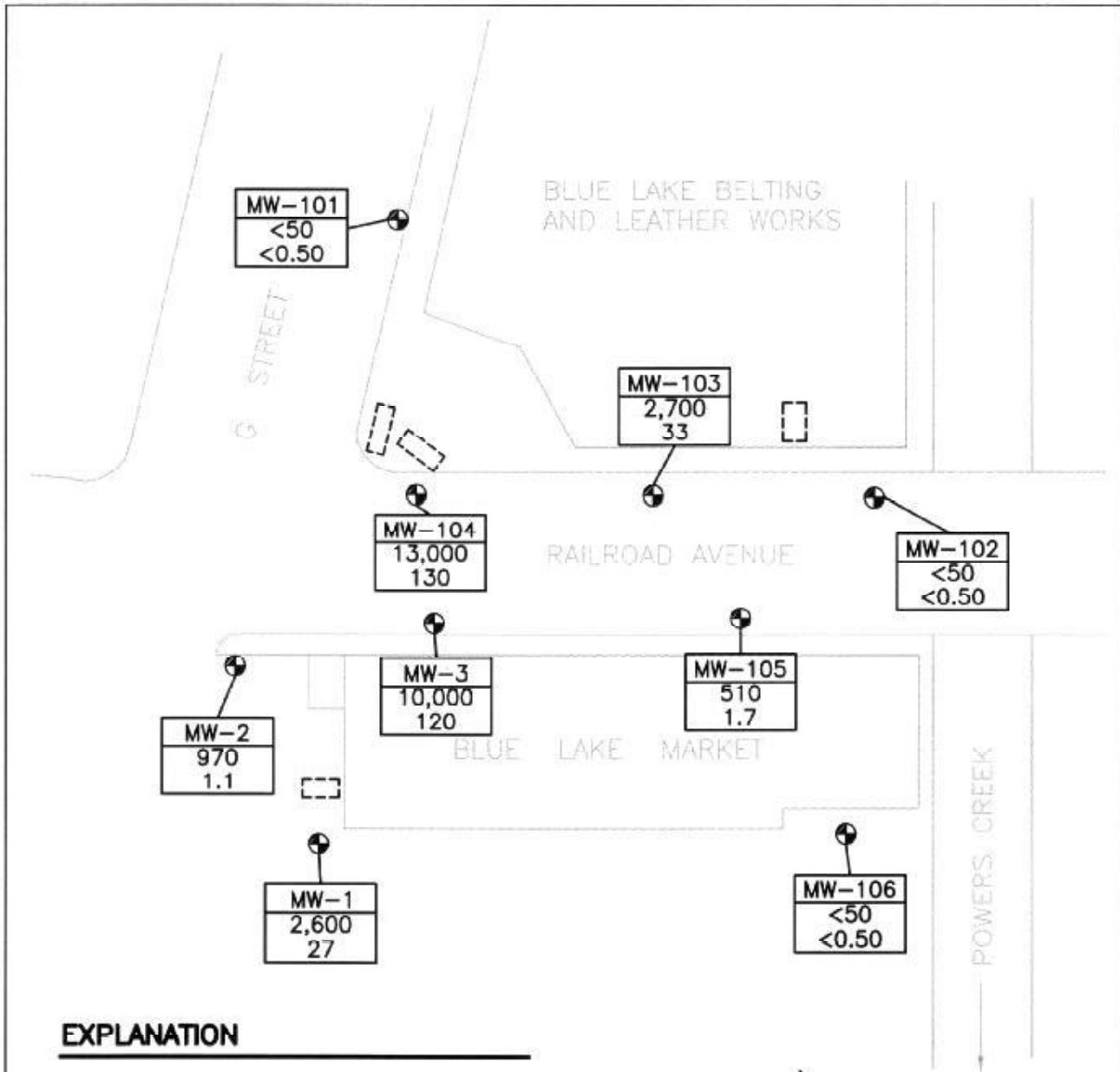
Sample Location	TPHG <sup>2</sup>	Benzene	Toluene	Ethylbenzene	m,p-xylene	o-xylene
MW-101	<50 <sup>3</sup>	<0.50	<0.50	<0.50	<0.50	<0.50
MW-102	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-103	2,700 <sup>4</sup>	33	47	46	66	13
MW-104	13,000 <sup>5</sup>	130	230	490	870	140
MW-105	510 <sup>4</sup>	1.7	9.8	0.50	0.57	<0.50
MW-106	<50	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Blue Lake Market Wells<sup>6</sup></b>						
MW-1 <sup>6</sup>	2,600 <sup>4</sup>	27	<30	18	10	<5.0
MW-2 <sup>6</sup>	970 <sup>4</sup>	1.1	<15	9.0	17	4.1
MW-3	10,000 <sup>5</sup>	120	480	340	650	170

1. ug/L: micrograms per liter
2. TPHG: Total Petroleum Hydrocarbons as Gasoline
3. <: Denotes a value that is “less than” the method detection limit.
4. Values include the reported gasoline components in addition to other peaks in the gasoline range.
5. Sample appears to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.
6. Data from MW-1 and MW-2 provided by LACO Associates.

The concentrations of TPHG and benzene present in the groundwater monitoring wells on June 1, 2005 are shown on Figure 4. The complete laboratory analytical reports and corresponding chain-of-custody documentation are included in Appendix C. Historic groundwater analytical data are presented in Appendix B, Table B-2.

### 3.3 Natural Attenuation Parameters

Three indicators of biodegradation (DO, DCO<sub>2</sub>, and ORP) were measured using field instrumentation in groundwater monitoring wells MW-101 through MW-106 and MW-3 prior to sampling, and are summarized in Table 3. Historic natural attenuation parameters are presented in Appendix B, Table B-3.

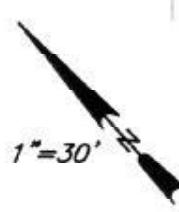


## EXPLANATION

● MONITORING WELL LOCATION

MW-106 MONITORING WELL DESIGNATION  
<50 TPHG ug/L  
<0.50 BENZENE ug/L

[ ] FORMER UST LOCATION



 Consulting Engineers & Geologists, Inc.	Blue Lake Belting and Leather Works Blue Lake, California	Summary of Groundwater Analytical Results, June 1, 2005	
		SIIN 097309	Figure 4

**Table 3**  
**DO, DCO<sub>2</sub>, and ORP Measurement Results, June 1, 2005**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Sample Location	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (millivolts)
MW-101	5.11	15	164
MW-102	2.93	15	175
MW-103	0.80	35	-6
MW-104	0.74	35	37
MW-105	0.99	15	162
MW-106	1.34	15	120
MW-3	0.73	30	4

1. DO: Dissolved Oxygen, measured with field instrumentation  
 2. ppm: parts per million  
 3. DCO<sub>2</sub>: Dissolved Carbon Dioxide, measured with field instrumentation  
 4. ORP: Oxidation-Reduction Potential, measured with field instrumentation

## 4.0 Remediation System Operation & Maintenance

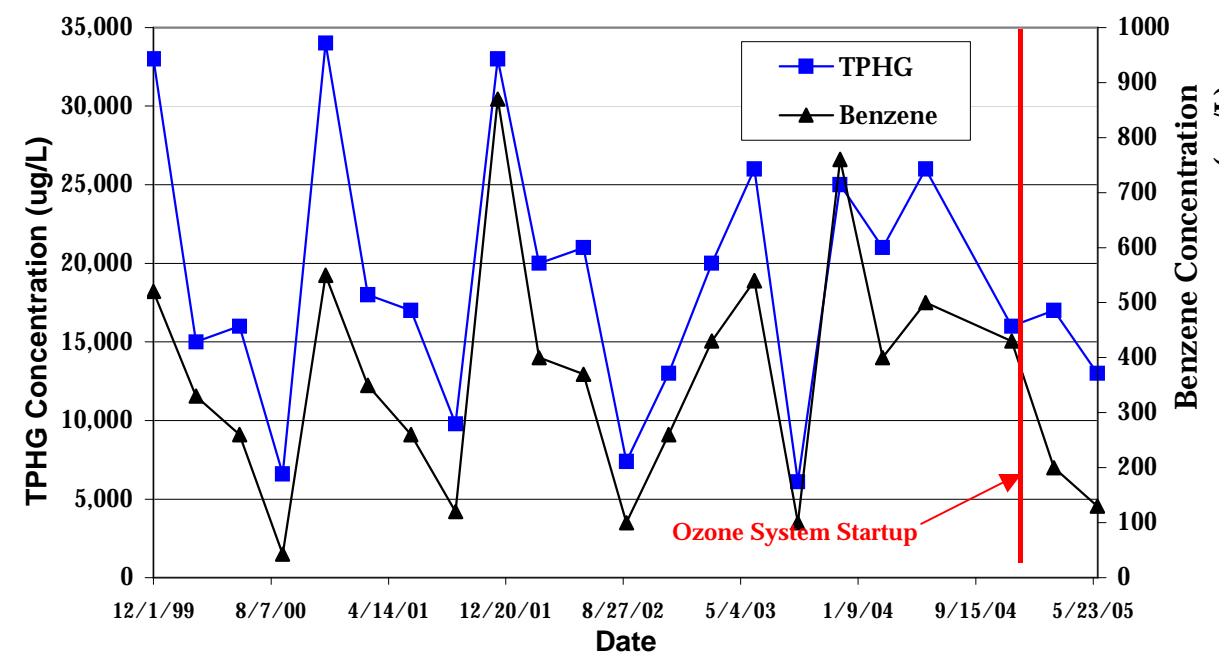
The ozone sparge system was started up on December 21, 2004 and has operated on a continual basis. During the initial month of operation, the ozone sparge system was monitored weekly to assure proper operation and adjustments were made as needed. After the initial one-month break-in period, site visits were conducted monthly. Ozone system operation and maintenance site visits will be conducted monthly for the remainder of the system's operation. Standard operation consists of monitoring the flows and pressures of various system components, checking the condition of wellheads, checking for leaks and wear on the ozone system, changing areas of ozone sparging based on groundwater monitoring results, and recording the system operating parameters. Standard maintenance consists of replacing air filters as needed and rebuilding air compressors as needed.

During the second quarter of 2005, site visits were conducted. The field notes are included in Appendix A. Historic ozone system monitoring results are presented in Appendix B, Table B-4. The ozone sparge wells closest to the building (SW-1, 2, 7, 8, and 9) were not brought on-line until February 3, 2005, after the concrete slab of the building was completely sealed to prevent any fugitive gas emissions into the building. Once the building slab was sealed, the wells nearest the building were brought on-line.

## 5.0 Discussion and Recommendations

Information collected during this and previous site investigations continues to indicate that petroleum hydrocarbons are present in groundwater in the vicinity of site wells MW-101, MW-103, MW-104, and MW-105. The groundwater sample collected from well MW-104 had the highest concentrations of petroleum hydrocarbons. The concentrations of TPHG and benzene over time for groundwater monitoring well MW-104 are shown on Figure 5.

**Figure 5**  
**Total Petroleum Hydrocarbons as Gasoline and Benzene Concentrations Over Time for Monitoring Well MW-104**



SHN recommends that quarterly monitoring be continued in conjunction with the operation of the ozone sparge system. Information collected during this monitoring event and the ongoing monitoring program will be used to assess the effectiveness of the remediation system. The next sampling event at the site is scheduled for September 2005. SHN will continue to coordinate with LACO for groundwater monitoring activities.

## 6.0 References Cited

- LACO Associates. (April 1992). *Subsurface Work Plan, Blue Lake Market*. Eureka: LACO.
- SHN Consulting Engineers & Geologists, Inc. (September 8, 2000). *Corrective Action Plan, Blue Lake Belting and Leather Works, 411 Railroad Avenue, Blue Lake; California, LOP # 12012*. Eureka: SHN.
- . (November 24, 2003). *Remedial Action Pilot Study Report of Findings, Blue Lake Belting and Leather Works, Case No. 12012*. Eureka: SHN.

---

**Appendix A**  
**Field Notes**



## CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

480 Hemsted Drive • Redding, CA 96002 • Tel: 530.221.5424 • FAX: 530.221.0135 • E-mail: shninfo@shn-redding.com  
812 W. Wabash • Eureka, CA 95501 • Tel: 707.441.8855 • FAX: 707.441.8877 • E-mail: shninfo@shn-enr.com

## DAILY FIELD REPORT

JOB NO	097309	
Page	1 of 12	
DAILY FIELD REPORT SEQUENCE NO		1
DATE	6-1-05	DAY OF WEEK
PROJECT ENGINEER/ SUPERVISOR	Mike Fogel	
TECHNICIAN	David R. Paine	

PROJECT NAME <i>Blue Lake Bolting and Leather</i>	CLIENT/OWNER <i>Blue Lake Bolting and Leather</i>	DAILY FIELD REPORT SEQUENCE NO 1
GENERAL LOCATION OF WORK <i>Blue Lake, CA.</i>	OWNER/CLIENT REPRESENTATIVE <i>Charles Hantzinger</i>	DATE <i>6-1-05</i>
TYPE OF WORK <i>Quarterly Sampling</i>	WEATHER <i>Partially cloudy</i>	DAY OF WEEK <i>Wednesday</i>
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	PROJECT ENGINEER/ SUPERVISOR <i>Mike Fogel</i>
		TECHNICIAN <i>David R. Paine</i>

## DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, &amp; COMPACTING

- 0835 Arrived at site removed lids and caps on 9 wells, MW-3 and MW-103 had water in flush mount, bailed out.  
0934 I started taking water level readings decommissioning the sounder after each well by scrubbing it with liquid soap then rinsing it with DI water, secured wells OBS-1 and OBS-2 with caps and lids.  
0957 I started taking DO readings.  
1052 I started purging MW-106 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.  
1116 I started purging MW-101 with a disposable bailer, purge water was caught in a graduated 3 gal. bucket.  
1140 I sampled MW-106, secured well with cap and lid.  
1149 I started purging MW-102 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.  
1215 I sampled MW-101, secured well with cap and lid.  
1222 I started purging MW-105 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.  
1250 I sampled MW-102, secured well with cap and lid.  
1300 I started purging MW-103 with a disposable bailer, purge water was caught in 5 gal. buckets.  
1325 I sampled MW-105, secured well with cap and lid.  
1335 I started purging MW-3 with a disposable bailer, purge water was caught in a graduated 3 gal. bucket.  
1400 I sampled MW-103, secured well with cap and lid.  
1406 I started purging MW-104 with a disposable bailer, purge water was caught in 5 gal. buckets.  
1450 I sampled MW-3, secured well with cap and lid.  
1500 I sampled MW-104, secured well with cap and lid.  
1517 OFF SITE
- 1122 LATE on site  
1306 LACO off site

COPY GIVEN TO:

REPORTED BY:

David R. Paine



## CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

480 Hemsted Drive \* Redding, CA 96002 \* Tel: 530.221.5424 \* FAX: 530.221.0135 \* E-mail: shninfo@shn-redding.com  
812 W. Wabash \* Eureka, CA 95501 \* Tel: 707.441.8855 \* FAX: 707.441.8877 \* E-mail: shninfo@shn-enr.com

## DAILY FIELD REPORT

JOB NO	097 309	
Page	2 of 12	
PROJECT NAME	CLIENT/OWNER	DAILY FIELD REPORT SEQUENCE NO
Blue Lake Bottling and Leather	Blue Lake Bottling and Leather	1
GENERAL LOCATION OF WORK	OWNER/CLIENT REPRESENTATIVE	DATE
Blue Lake, CA.	Charles Hantzinger	6-1-05
TYPE OF WORK	WEATHER	DAY OF WEEK
Quarterly Sampling	Partially cloudy	Wednesday
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	PROJECT ENGINEER/ SUPERVISOR
		Mike Fogel
		TECHNICIAN
		David R. Paine

## DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, &amp; COMPACTING

Note: All decon water and purge water was caught then poured into 2.50 gal. plastic drums that I brought in the truck, then transported to SHN's 1,000 gal. PWST located at 812 W. Wabash Avenue Eureka, CA 79 gallons total.

COPY GIVEN TO:

REPORTED BY: *David R. Paine*



# CONSULTING ENGINEERS & GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-engr.com

## Groundwater Elevations



CONSULTING ENGINEERS & GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enqr.com

## EQUIPMENT CALIBRATION SHEET

Name:	David R. Paine			
Project Name:	Blue Lake Belting and Leather			
Reference No.:	097309			
Date:	6-1-05			
Equipment:	<input checked="" type="checkbox"/> pH & EC <input type="checkbox"/> PID <input type="checkbox"/> GTCO <sub>2</sub> <input type="checkbox"/> GTLEL <input type="checkbox"/> Turbidity <input checked="" type="checkbox"/> Other <u>Dissolved Oxygen meter y5195</u>			
Description of Calibration Procedure and Results:  <u>pH &amp; Ec meter is calibrated using a 2 buffer method with 7.01 and 4.01, the Ec (conductivity) is set at 1413 mS.</u>  <u>DO meter is self calibrating with the Altimeter set at 1.</u>  _____ _____ _____ _____ _____				



## CONSULTING ENGINEERS & GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## Water Sampling Data Sheet

Project Name: Blue Lake Bedding and Leathers Date/Time: 6-1-05  
Project No.: 097309 Sampler Name: David R. Painz  
Location: Blue Lake, CA Sample Type: Ground water  
Well #: MW-101 Weather: Partially cloudy  
Hydrocarbon Thickness/Depth (feet): NA Key Needed: YES      Dolphin

Total Well Depth (feet)	Initial Depth to Water (feet)	=	Height of Water Column (feet)	$\times$	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
1430 1300	8.01	=	4.99	$\times$	0.163	=	0.81

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1010	5.11						0 gal.	
1116	↓	15	164				0.25 gal.	
1122	↓			121	58.3°	6.02	1 gal.	
1126	No Flow			116	58°	6.07	1.25 gal.	
1129	than cell			114	58°	6.02	2.5° gal.	
1215	Sewage Time							

Purge Method: Hand bail

Total Volume Removed: 2.50 (gal)

## Laboratory Information

Laboratory Information				
Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-101	3 ~ 4cm vials	YES / HCl	NCL	TPHG / BTEX

Well Condition: *Good*

**Remarks:**

Recharged to 8.01 at sampling Time



CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## Water Sampling Data Sheet

Project Name:	Blue Lake Bellting and Leather	Date/Time:	6-1-05
Project No.:	097309	Sampler Name:	David R. Paine
Location:	Blue Lake, CA	Sample Type:	Ground water
Well #:	MW-102	Weather	Partially cloudy
Hydrocarbon Thickness/Depth (feet):	NH	Key Needed:	YES Dolphin

$$\begin{array}{l} \text{Total Well Depth} \quad \text{Initial Depth to} \\ (\text{feet}) \quad \text{Water (feet)} \end{array} = \begin{array}{l} \text{Height of Water} \\ \text{Column (feet)} \end{array} \times \begin{array}{l} 0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well)} \end{array} = \begin{array}{l} 1 \text{ Casing Volume} \\ (\text{gal}) \end{array}$$

19.50	-	7.80	=	11.70	$\times$	0.163	=	1.91
-------	---	------	---	-------	----------	-------	---	------

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1017	2.93						0 gal.	
1149		15	125				0.25 gal.	
1157	↓			99	57.7°	6.18	2 gal.	
1202	No Flow			98	57.4°	6.18	4 gal.	
1207	thru cell			98	57.1°	6.21	6 gal.	
1250	Samp. Time							

Purge Method: Hand bail

Total Volume Removed: 6.00 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-102	3 - 4cm Vol's	YES / HCl	NCL	TPHG / BTEX

Well Condition: Good

Remarks:

Recharged to 7.80 at sampling time



CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## Water Sampling Data Sheet

Project Name:	Blue Lake Belting and Leather	Date/Time:	6-1-05
Project No.:	097309	Sampler Name:	David R. Paine
Location:	Blue Lake, CA	Sample Type:	Ground water
Well #:	MW-103	Weather:	Partially cloudy
Hydrocarbon Thickness/Depth (feet):	NA	Key Needed:	YES      Dolphin

$$\begin{array}{l} \text{Total Well Depth} \quad \text{Initial Depth to} \\ (\text{feet}) \qquad \text{Water (feet)} \end{array} = \begin{array}{l} \text{Height of Water} \\ \text{Column (feet)} \end{array} \times \begin{array}{l} 0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well) } \end{array} = \begin{array}{l} 1 \text{ Casing Volume} \\ (\text{gal}) \end{array}$$

18.65	-	8.09	=	10.56	$\times$	0.653	=	6.90
-------	---	------	---	-------	----------	-------	---	------

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1030	0.80						0 gal	
1300		3.5	-6				0.25 gal	
1310		↓		122	60.1°	6.19	8 gal	
1315	No Flow			120	59.8°	6.24	16 gal	
1320	then still			119	59.7°	6.22	21 gal	
1400	Sample Time							

Purge Method: Hand bail

Total Volume Removed: 21.00 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-103	3 - 4cm Vials	YES / HCL	NCL	TPHG / BTEX

Well Condition: Good

Remarks:

Recharged to 8.10 + sampling time



CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## Water Sampling Data Sheet

Project Name:	Blue Lake Bedding and Leaching	Date/Time:	6-1-05
Project No.:	097309	Sampler Name:	David R. Painz
Location:	Blue Lake, CA	Sample Type:	Ground water
Well #:	MW-104	Weather:	Partially cloudy
Hydrocarbon Thickness/Depth (feet):	NA	Key Needed:	YES      Dolphin

$$\begin{array}{l} \text{Total Well Depth} \quad \text{Initial Depth to} \\ (\text{feet}) \qquad \qquad \text{Water (feet)} \end{array} = \begin{array}{l} \text{Height of Water} \\ \text{Column (feet)} \end{array} \times \begin{array}{l} 0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well) } \end{array} = \begin{array}{l} 1 \text{ Casing Volume} \\ (\text{gal}) \end{array}$$

16.55	-	7.72	=	8.83	$\times$	0.653	=	5.77
-------	---	------	---	------	----------	-------	---	------

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1042	0.14						0 gal	
1406		35	37				0.25 gal	
1416	↓			152	62.1°	6.24	6.50 gal	
1420	No Flow			143	61.5°	6.28	12 gal	
1425	thru cell			128	61.3°	6.26	19 gal	
1431				125	61.3°	6.28	25.5 gal	
1437				123	61.1°	6.25	29.5 gal	
1500	Sampling Time							

Purge Method: Hand bail

Total Volume Removed: 29.50 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-104	3 - 4cm Vials	YES / HCl	NCL	TPHG / BTEX

Well Condition: Good

Remarks:

Recharged to 7.85 c + sampling time.



812 W. Webash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

### Water Sampling Data Sheet

Project Name:	<u>Blue Lake Belting and Leather</u>	Date/Time:	<u>6-1-05</u>
Project No.:	<u>097309</u>	Sampler Name:	<u>David R. Paine</u>
Location:	<u>Blue Lake, CA</u>	Sample Type:	<u>Ground water</u>
Well #:	<u>MW-105</u>	Weather:	<u>Partially cloudy</u>
Hydrocarbon Thickness/Depth (feet):	<u>NH</u>	Key Needed:	<u>YES</u> <u>Dolphin</u>
Total Well Depth (feet)	Initial Depth to Water (feet)	= Height of Water Column (feet)	$\times$ 0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well) = 1 Casing Volume (gal)
<u>15.10</u>	<u>7.94</u>	<u>7.16</u>	$\times$ <u>0.163</u> = <u>1.17</u>

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1024	<u>0.99</u>						0 gal.	
1222		<u>15</u>	<u>162</u>				<u>0.25</u> gal.	
1230	<u>↓</u>			<u>124</u>	<u>59.5°</u>	<u>6.19</u>	<u>1.25</u> gal.	
1234	No Flow			<u>138</u>	<u>59.2°</u>	<u>6.33</u>	<u>2.50</u> gal.	
1236	flow cell			<u>148</u>	<u>59.2°</u>	<u>6.31</u>	<u>3.25</u> gal.	
1243				<u>149</u>	<u>59.3°</u>	<u>6.35</u>	<u>5</u> gal.	
1325	Sample Time							

Purge Method: Hand bail

Total Volume Removed: 5.00 (gal)

#### Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
<u>MW-105</u>	<u>3 - 4cm vials</u>	<u>YES / HCL</u>	<u>NCL</u>	<u>TPHG / BTEX</u>

Well Condition: Good

Remarks: Recharged to 0.00 at sampling time



CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## Water Sampling Data Sheet

Project Name:	<u>Blue Lake Betting and Leather</u>	Date/Time:	<u>6-1-05</u>
Project No.:	<u>097309</u>	Sampler Name:	<u>David R. Paine</u>
Location:	<u>Blue Lake, CA</u>	Sample Type:	<u>Ground water</u>
Well #:	<u>MW-106</u>	Weather	<u>Partially cloudy</u>
Hydrocarbon Thickness/Depth (feet):	<u>NA</u>	Key Needed:	<u>YES</u> <u>Dolphin</u>

Total Well Depth (feet)	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
<u>15.00</u>	<u>5.79</u>	=	<u>9.21</u>	x	<u>0.163</u>	=	<u>1.50</u>

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1002	<u>1.34</u>						<u>0</u> gal	
1052		<u>15</u>	<u>120</u>				<u>0.25</u> gal	
1101				<u>115</u>	<u>58.2°</u>	<u>6.05</u>	<u>1.50</u> gal	
1106	No Flow			<u>110</u>	<u>59.5°</u>	<u>6.04</u>	<u>3</u> gal	
1111	than cell			<u>112</u>	<u>59.4°</u>	<u>6.08</u>	<u>4.50</u> gal	
1140	<u>Sample Time</u>							

Purge Method: Hand bailTotal Volume Removed: 4.50 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-106	<u>3 - 4cm vials</u>	<u>YES / HCl</u>	<u>NCL</u>	<u>TPHG / BTEX</u>

Well Condition: Good

Remarks:

Recharged to 5.81 at sampling time



## CONSULTING ENGINEERS & GEOLOGISTS, INC.

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

### **Water Sampling Data Sheet**

Project Name: Blue Lake Belting and Leather Date/Time: 6-1-05  
Project No.: 097309 Sampler Name: David R. Paine  
Location: Blue Lake, CA Sample Type: Ground water  
Well #: MW-3 Weather: Partially cloudy  
Hydrocarbon Thickness/Depth (feet): NA Key Needed: yes Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.70	-	8.07	=	6.63	x	0.163	=	1.08

Purge Method: Hand Best

Total Volume Removed: 3.25 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-3	3 - 40ml vials	yes HCl	NCL	TPH/G/BTEX

Well Condition: Good

Remarks:

Recharged to 8.23 at sample time



CONSULTING ENGINEERS & GEOLOGISTS, INC.

812 W. Webash • Eureka, CA 95501-2738 • TEL: 707/441-6955 • FAX: 707/441-8977 • sbainfo@shb.com

Blue Lake Belting & Leather Works  
097309  
Ozone System Monitoring Form

Technician:	<u>DCI</u>	Date:	<u>4/15/05</u>
Weather:	<u>Clear</u>	Time Onsite:	<u>1441</u> Offsite: <u>1518</u>
Electric Meter:	<u>03536</u>	Ozone Badge:	Positive -or- <u>Negative</u>

- Don ozone badge and activate,
- Inspect overall system for leaks, wear, etc.
- Inspect vaults of monitoring wells, observation wells, sparge wells, and pull box,
- Inspect air filters (clean or replace),
- Complete system readings,
- Inspect ozone badge for positive or negative exposure.

System Readings	
Ozone Generator Flow (scfh)	<u>5</u>
Ozone Generator Pressure (psi)	<u>11</u>
Ozone Output (%)	<u>100</u>
Auto Drain Valve	On: <u>1</u> (sec)      Off: <u>45</u> (min)
System Run Time (hr:min)	<u>545hr, 6min</u>

Well	Flow (scfm)	Pressure (psi)	Total Run Time (hr:min)	Programmed Run Time (minutes)	Observations
SP-1	<u>1.2</u>	<u>5</u>	<u>113:27</u>	<u>5</u>	
SP-2	<u>1.2</u>	<u>7</u>	<u>113:3</u>	<u>5</u>	
SP-3	<u>1.2</u>	<u>8</u>	<u>433:41</u>	<u>10</u>	
SP-4	<u>1.1</u>	<u>7</u>	<u>432:58</u>	<u>10</u>	
SP-5	<u>1.2</u>	<u>8</u>	<u>432:44</u>	<u>10</u>	
SP-6	<u>1.0</u>	<u>10</u>	<u>422:32</u>	<u>10</u>	
SP-7	<u>1.1</u>	<u>8</u>	<u>112:51</u>	<u>5</u>	
SP-8	<u>1.3</u>	<u>2.25</u>	<u>112:58</u>	<u>5</u>	
SP-9	<u>1.2</u>	<u>6</u>	<u>112:53</u>	<u>5</u>	
SP-10	<u>1.2</u>	<u>7</u>	<u>432:27</u>	<u>10</u>	

Comments: \_\_\_\_\_

---



---



---



---



---



---



---



---



---



---



**CONSULTING ENGINEERS & GEOLOGISTS, INC.**

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • [shninfo@shn-encl.com](mailto:shninfo@shn-encl.com)

# DAILY FIELD REPORT

Job No. 097309

Page \_\_\_\_\_ of \_\_\_\_\_

Project Name <u>Blue Lake Belting &amp; Leather</u>	Client/Owner	Daily Field Report Sequence No	
General Location Of Work	Owner/Client Representative	Date <u>5/12/05</u>	Day Of Week <u>Thur.</u>
General Contractor	Grading Contractor	Project Engineer <u>Mike Foget</u>	
Type Of Work <u>D&amp;M</u>	Grading Contractor, Superintendent, Or Foreman	Supervisor	
Source & Description Of Fill Material	Weather <u>Overcast</u>	Technician <u>Dustin Tibbets</u>	
Key Persons Contacted (Civil Engr, Architect, Developer, Etc)			

Describe Equipment Used For Hauling, Spreading, Watering, Conditioning, & Compacting

1055 On site. Taking reading's.  
1120 Clean and loaded up.  
1130 Off site.

Copy given to:

Reported By:

Dustin Tibbets

## Blue Lake Belting &amp; Leather Works

097309

## Ozone System Monitoring Form

Technician: <u>DCT</u>	Date: <u>5/12/05</u>
Weather: <u>Overcast</u>	Time Onsite: <u>1055</u> Offsite:
Electric Meter: <u>04323</u>	Ozone Badge: Positive -or- <u>Negative</u>

- Don ozone badge and activate,
- Inspect overall system for leaks, wear, etc.
- Inspect vaults of monitoring wells, observation wells, sparge wells, and pull box,
- Inspect air filters (clean or replace),
- Complete system readings,
- Inspect ozone badge for positive or negative exposure.

System Readings	
Ozone Generator Flow (scfh)	<u>5.5</u>
Ozone Generator Pressure (psi)	<u>11</u>
Ozone Output (%)	<u>95%</u>
Auto Drain Valve	On: <u>1</u> (sec)      Off: <u>45</u> (min)
System Run Time (hr:min)	<u>89hr. 14 min</u>

Well	Flow (scfm)	Pressure (psi)	Total Run Time (hr:min)	Programmed Run Time (minutes)	Observations
SP-1	<u>1.2</u>	<u>5</u>	<u>155.49</u>	<u>5</u>	
SP-2	<u>1.1</u>	<u>7</u>	<u>155.29</u>	<u>5</u>	
SP-3	<u>1.1</u>	<u>8</u>	<u>518.32</u>	<u>10</u>	
SP-4	<u>1.1</u>	<u>7</u>	<u>517.49</u>	<u>10</u>	
SP-5	<u>1.1</u>	<u>7</u>	<u>517.35</u>	<u>10</u>	
SP-6	<u>.90</u>	<u>10</u>	<u>517.23</u>	<u>10</u>	
SP-7	<u>1.1</u>	<u>8</u>	<u>155.17</u>	<u>5</u>	
SP-8	<u>1.3</u>	<u>3</u>	<u>155.19</u>	<u>5</u>	
SP-9	<u>1.1</u>	<u>6</u>	<u>155.19</u>	<u>5</u>	
SP-10	<u>1.1</u>	<u>8</u>	<u>517.21</u>	<u>10</u>	

Comments:

---



---



---



---



---



---



---



---



---



---



CONSULTING ENGINEERS &amp; GEOLOGISTS, INC.

812 W. Webash • Eureka, CA 95501-2128 • 707/441-8866 • FAX: 707/441-8877 • shninfo@shn-engr.com

## DAILY FIELD REPORT

Job No. 097309

Page \_\_\_\_\_ of \_\_\_\_\_

Project Name <u>Blue Lake Ditching &amp; Leaching</u>	Client/Owner	Daily Field Report Sequence No	
General Location Of Work	Owner/Client Representative	Date <u>6/3/05</u>	Day Of Week <u>Fri.</u>
General Contractor	Grading Contractor	Project Engineer <u>Mike Fogel</u>	
Type Of Work <u>O&amp;M</u>	Grading Contractor, Superintendent, Or Foreman	Supervisor	
Source & Description Of Fill Material	Weather <u>Cloudy</u>	Technician <u>Dustin Tibbetts</u>	Key Persons Contacted (Civil Engr, Architect, Developer, Etc)

Describe Equipment Used For Hauling, Spreading, Watering, Conditioning, &amp; Compacting

1223 On site.  
1226 Taking readings.  
1245 Loaded up.  
1250 off site.

Copy given to:

Reported by:

Dustin Tibbetts

## Blue Lake Belting &amp; Leather Works

097309

## Ozone System Monitoring Form

Technician: <u>DCT</u>	Date: <u>6/16/05</u>
Weather: <u>Cloudy</u>	Time Onsite: <u>12:33</u> Offsite:
Electric Meter: <u>04968</u>	Ozone Badge: Positive -or- Negative

- Don ozone badge and activate,
- Inspect overall system for leaks, wear, etc.
- Inspect vaults of monitoring wells, observation wells, sparge wells, and pull box,
- Inspect air filters (clean or replace),
- Complete system readings,
- Inspect ozone badge for positive or negative exposure.

System Readings		
Ozone Generator Flow (scfh)		<u>9</u>
Ozone Generator Pressure (psi)		<u>8.5</u>
Ozone Output (%)		<u>97%</u>
Auto Drain Valve	On: <u>1</u> (sec)	Off: <u>45</u> (min)
System Run Time (hr:min)	<u>63 hr 18 min</u>	

Well	Flow (scfm)	Pressure (psi)	Total Run Time (hr:min)	Programmed Run Time (minutes)	Observations
SP-1	<u>1.15</u>	<u>5</u>	<u>190 hr. 30 min</u>	<u>5</u>	
SP-2	<u>1.1</u>	<u>7.5</u>	<u>190 hr 15 min</u>	<u>5</u>	
SP-3	<u>1.05</u>	<u>8</u>	<u>41 hr 56 min</u>	<u>10</u>	
SP-4	<u>1.05</u>	<u>7</u>	<u>41 hr. 7 min</u>	<u>10</u>	
SP-5	<u>1.15</u>	<u>4.5</u>	<u>40 hr. 49 min</u>	<u>10</u>	
SP-6	<u>1</u>	<u>10</u>	<u>40 hr. 35 min</u>	<u>10</u>	
SP-7	<u>1.05</u>	<u>7.5</u>	<u>187 hr. 53 min</u>	<u>5</u>	
SP-8	<u>1.2</u>	<u>3</u>	<u>190 hr. 0 min</u>	<u>5</u>	
SP-9	<u>1.1</u>	<u>6</u>	<u>189 hr. 55 min</u>	<u>5</u>	
SP-10	<u>1.0</u>	<u>7.5</u>	<u>40 hr. 28 min</u>	<u>10</u>	

Comments:

---



---



---



---



---



---



---



---



## ENGINEERS &amp; GEOLOGISTS

812 W. Wabash Ave.  
Eureka, CA 95501-2138Tel. 707 / 441-8855  
Fax: 707 / 441-8877

JOB 097309- Elevation  
 SHEET NO. 1 OF 1  
 CALCULATED BY C. Fisher DATE 20<sup>th</sup> June 05  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

Blue Lake Belting & Leather Works

System &amp; well total Run Times

<u>Date</u>	<u>SP-1 Run Time (5min)</u>	<u>SP-3 Run Time (10 min)</u>
4-15 (105)	113:27	433:41
5-17 (132)	155:49	518:32
6-3 (159)	190:31	41:56 ← Incorrect!

Total Run times are incorrect for SP-3 run &amp; SP-10

Run time for SP-1 (5-12 to 6-3) =  $190:31 - 155:49 = 34:42$ 

Monthly  
Run time for SP-3 then 6 & SP-10 is 2 times SP-1 run time  
 $\rightarrow 34:42 \times 2 = 69:24$

	<u>Run times</u> <u>5-12-05</u>	<u>Additional Time</u>	<u>Recalculated</u> <u>Run Times</u>	<u>for 6-3-05</u>
SP-3	= 518:32	+ 69:24	=	587:56
SP-4	= 517:49	+ 69:24	=	587:13
SP-5	= 517:35	+ 69:24	=	586:59
SP-6	= 517:23	+ 69:24	=	586:47
SP-10	= 517:21	+ 69:24	=	586:45
SP-1		- 190:31		
SP-2		= 190:15		
SP-7		= 189:53		
SP-8		= 190:00		
SP-9		= 189:55		

Total System Run Time = 3,886:14

gr5

## CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501  
 TEL 707.443.5054  
 FAX 707.443.0553

Page 1 of 1

Project Name: <b>BLUE LAKE MARKET</b>				Tech: <b>SJD</b>	
Project No.: <b>3888.01</b>				Mob/Demob time: <b>.50 / .25</b>	
Date: <b>6-1-05</b>				Travel time: <b>1.0</b>	
Global ID No.: <b>T0602300170</b>				Time on site: <b>11:30</b>	
PM: TDN				Time off site: <b>1:05</b>	
				Mileage: <b>34</b>	
<b>FIELD INTRUSIONS</b>  DEPTH MEASUREMENTS ARE REFERENCED TO TOP OF CASING	WELL No.	MW1	MW2	MW3	
	DIAMETER (in)	2.0	2.0	2.0	
	SCREENED INTERVAL (#)	5-15	4-14	5-15	
	DEPTH TO WATER (ft)	6.47	7.62	8.22	
		INITIAL	FINAL	INITIAL	FINAL
	pH				
	TEMP (°C)				
	ECD (meters)				
	ORP (mV)	-64	-49	-45	-31
	DO (mg/L)	0.93	0.43	0.87	0.30
OTHER (units)					
<b>PURGE</b>	TIME	11:58	12:06	12:30	12:38
	METHOD (DHP/CB/B)	DHP		DHP	
	RATE (L/min)	0.22		0.20	
	VOLUME (L)	1.80		1.60	
	COLOR	CLEAR	CLEAR	CLEAR	CLEAR
	ODOR	SOFT SULFUR/RUBBER	LIGHT RUBBER/FISH		
	INTAKE DEPTH (FEET)	10.0		10.0	
	TIME	12:07		12:39	
	METHOD (DHP/CB/B)	DHP		DHP	
	ANALYTES	TPHg/BTEX		TPHg/BTEX	
TOTAL DRAWDOWN (FEET)	0.55		0.52		
REMARKS					
WELL CONDITION	All THREE BOLT HOLES STRIPPED		good		
WASTE DRUMS	ONE DOT DRUM ONSITE SOIL 1/4 FULL				

DHP=DOWN HOLE PUMP CB=CHECK BALL B=BAILER FD=FIELD DUPLICATE MB=METHOD BLANK FF=FIELD FILTERED

REVISED 8/1/2005



**LAW & ASSOCIATES**  
CONSULTING ENGINEERS

21 West Fourth Street, Eureka, CA 95501  
TEL 707.443.5054  
FAX 707.443.0553

**Project Name:**

## BWE LAKE MARKET

Project No.: 3868.01

Tech: SJD  
Date: 6-1-05

WELL ID:

WELL ID:

WELL ID:

WELL ID:

TIME	pH	TEMP (°C)	Eow (μmols)	ORP (mV)	DO (mg/L)	TIME	pH	TEMP (°C)	Eow (μmols)	ORP (mV)	DO (mg/L)
00:00	7.0	20.0	100	-200	100	00:00	7.0	20.0	100	-200	100
06:00	6.5	22.0	100	-150	100	06:00	7.5	22.0	100	-150	100
12:00	6.0	24.0	100	-100	100	12:00	8.0	24.0	100	-100	100
18:00	5.5	26.0	100	-50	100	18:00	9.0	26.0	100	-50	100
24:00	5.0	28.0	100	0	100	24:00	10.0	28.0	100	0	100



**LACCI ASSOCIATES**  
CONSULTING ENGINEERS.

21 West Fourth Street, Eureka, CA 95501  
TEL 707.443.5054  
FAX 707.443.0553

Project Name: BLUE LAKES MARKET  
Project No.: 3888.01

Tech: SJD  
Date: 6-1-05

Client Name: **BLUE LAKE BELTING AND LEATHER**

The water from your site: **411 RAILROAD AVENUE BLUE LAKE, CA LOP # 12012**

SHN ref #: **097309** Collected On: **3/1/05**

Has been tested and certified as acceptable to be discharged into the City of Eureka municipal sewer system.

Amount Discharged:

**74 GALLONS**

Date Discharged: **4/29/05**

Certified by: **DAVID R. PAIN**

**SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.**  
City of Eureka Wastewater Discharge Permit #65

Client Name: **BLUE LAKE BELTING AND LEATHER**

---

The water from your site: **411 RAILROAD AVENUE BLUE  
LAKE, CA LOP # 12012**

---

SHN ref #: **097309**

---

Has been tested and certified as acceptable to be discharged into the City of Eureka municipal sewer system.

Amount Discharged:

**79 GALLONS**

Date Discharged: **7/21/05**

Certified by: **DAVID R. PAINÉ**

---

**SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.**  
City of Eureka Wastewater Discharge Permit #65

---

**Appendix B**

**Historic Monitoring Data**

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-101	12/01/99	91.89	6.24	85.65
	03/01/00		6.49	85.40
	06/01/00		7.89	84.00
	09/01/00		13.57	78.32
	12/01/00		7.57	84.32
	03/01/01		7.59	84.30
	06/01/01		9.70	82.19
	09/04/01		13.64	78.25
	12/03/01		5.84	86.05
	03/01/02		7.18	84.71
	06/03/02		9.13	82.76
	09/03/02		13.66	78.23
	12/02/02		13.16	78.73
	03/03/03		7.38	84.51
	06/02/03		7.81	84.08
	09/02/03		13.50	78.39
	12/01/03		7.31	84.58
	03/01/04		6.60	85.29
	06/01/04		7.94	83.95
	09/02/04		13.40	78.49
	12/01/04		7.96	83.93
	03/01/05		7.80	84.47
	06/01/05		8.01	84.26
MW-102	12/01/99	91.19	7.23	83.96
	03/01/00		7.23	83.96
	06/01/00		8.12	83.07
	09/01/00		13.48	77.71
	12/01/00		7.83	83.36
	03/01/01		7.92	83.27
	06/01/01		10.43	80.76
	09/04/01		13.68	77.51
	12/03/01		6.83	84.36
	03/01/02		7.56	83.63
	06/03/02		9.87	81.32
	09/03/02		13.73	77.46
	12/02/02		13.21	77.98
	03/03/03		7.62	83.57
	06/02/03		8.02	83.17

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-102 (cont'd)	09/02/03	91.19	13.40	77.79
	12/01/03		7.65	83.54
	03/01/04		7.23	83.96
	06/01/04		8.29	82.90
	09/02/04		13.43	77.76
	12/01/04		8.02	83.17
	03/01/05		7.66	83.53
	06/01/05		7.80	83.39
MW-103	12/01/99	91.57	7.41	84.16
	03/01/00		7.48	84.09
	06/01/00		8.44	83.13
	09/01/00		13.77	77.80
	12/01/00		8.09	83.48
	03/01/01		8.21	83.36
	06/01/01		10.71	80.86
	09/04/01		13.99	77.58
	12/03/01		6.99	84.58
	03/01/02		7.89	83.68
	06/03/02		10.23	81.34
	09/03/02		14.06	77.51
	12/02/02		13.50	78.07
	03/03/03		7.97	83.60
	06/02/03		8.38	83.19
	09/02/03		13.65	77.92
	12/01/03		7.93	83.64
	03/01/04		7.54	84.03
	06/01/04		8.60	82.97
	09/02/04		13.73	77.84
	12/01/04		8.32	83.25
	03/01/05		7.91	83.66
	06/01/05		8.09	83.48
MW-104	12/01/99	91.48	6.58	84.90
	03/01/00		6.76	84.72
	06/01/00		8.03	83.45
	09/01/00		13.48	78.00
	12/01/00		7.63	83.85
	03/01/01		7.74	83.74
	06/01/01		9.94	81.54

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-104 (cont'd)	09/04/01	91.48	13.67	77.81
	12/03/01		6.15	85.33
	03/01/02		7.35	84.13
	06/03/02		9.40	82.08
	09/03/02		13.80	77.68
	12/02/02		13.01	78.47
	03/03/03		7.51	83.97
	06/02/03		7.93	83.55
	09/02/03		13.30	78.18
	12/01/03		7.36	84.12
	03/01/04		6.76	84.72
	06/01/04		8.05	83.43
	09/02/04		13.29	78.19
	12/01/04		8.01	83.47
	03/01/05		7.51	83.97
	06/01/05		7.72	83.76
MW-105	12/01/99	91.32	7.25	84.07
	03/01/00		7.30	84.02
	06/01/00		8.25	83.07
	09/01/00		13.64	77.68
	12/01/00		7.91	83.41
	03/01/01		8.04	83.28
	06/01/01		10.57	80.75
	09/04/01		13.85	77.47
	12/03/01		6.84	84.48
	03/01/02		7.69	83.63
	06/03/02		10.01	81.31
	09/03/02		13.91	77.41
	12/02/02		13.39	77.93
	03/03/03		7.75	83.57
	06/02/03		8.17	83.15
	09/02/03		13.58	77.74
	12/01/03		7.76	83.56
	03/01/04		7.35	85.97
	06/01/04		8.44	82.88
	09/02/04		13.61	77.71
	12/01/04		8.15	83.17
	03/01/05		7.76	83.56
	06/01/05		7.94	83.38

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-106	12/01/99	88.88	5.30	83.58
	03/01/00		5.22	83.66
	06/01/00		6.09	82.79
	09/01/00		11.68	77.20
	12/01/00		5.81	83.07
	03/01/01		5.91	82.97
	06/01/01		8.45	80.43
	09/04/01		11.92	76.96
	12/03/01		4.96	83.92
	03/01/02		5.59	83.29
	06/03/02		7.91	80.97
	09/03/02		11.99	76.89
	12/02/02		11.43	77.45
	03/03/03		5.64	83.24
	06/02/03		6.04	82.84
	09/02/03		11.58	77.30
	12/01/03		5.71	83.17
	03/01/04		5.24	83.64
	06/01/04		6.27	82.61
	09/02/04		11.65	77.23
	12/01/04		5.98	82.90
	03/01/05		5.62	83.26
	06/01/05		5.79	83.09
MW-1	12/01/99	89.45 <sup>4</sup>	5.05	84.40
	03/01/00		5.11	84.34
	06/01/00		6.64	82.81
	09/01/00		NA <sup>5</sup>	NA
	12/01/00		7.45	82.00
	03/01/01		6.40	83.05
	12/03/01		4.47	84.98
	03/01/02		4.93	84.52
	06/05/02		8.45	81.00
	09/03/02		12.01	77.44
	01/02/03		4.56	84.89
	03/03/03		NA	NA
	06/02/03		6.65	82.80
	09/11/03		NA	NA

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-1 (cont'd)	12/01/03	89.45 <sup>4</sup>	5.54	83.91
	03/01/04		5.68	83.77
	09/02/04		11.73	77.72
	12/01/04		6.58	82.87
	03/01/05		5.96	83.49
	06/01/05		6.47	82.98
MW-2	12/01/99	91.29 <sup>4</sup>	6.25	85.04
	03/01/00		6.43	84.86
	06/01/00		7.82	83.47
	09/01/00		NA	NA
	12/01/00		6.09	85.20
	03/01/01		7.54	83.75
	12/03/01		5.74	85.55
	03/01/02		6.44	84.85
	06/05/02		9.32	81.97
	09/03/02		12.90	78.39
	01/02/03		5.78	85.51
	03/03/03		7.37	83.92
	06/02/03		7.81	83.48
	09/11/03		NA	NA
	12/01/03		7.01	84.28
	03/01/04		6.95	84.34
	09/02/04		13.81	77.48
	12/01/04		7.88	83.41
	03/01/05		7.33	83.96
	06/01/05		7.62	83.67
MW-3	12/01/99	91.63 <sup>4</sup>	7.29	84.34
	03/01/00		7.25	84.38
	06/01/00		8.36	83.27
	09/01/00		NA	NA
	12/01/00		8.07	83.56
	03/01/01		8.36	83.27
	12/03/01		6.78	84.85
	03/01/02		7.33	84.30
	06/05/02		10.23	81.40
	09/03/02		13.88	77.75
	01/02/03		6.95	84.68

**Table B-1**  
**Historic Groundwater Elevations**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Location	Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-3 (cont'd)	03/03/03	91.63 <sup>4</sup>	7.95	83.68
	06/02/03		8.42	83.21
	09/11/03		NA	NA
	12/01/03		7.83	83.80
	03/01/04		7.61	84.02
	09/02/04		13.68	77.95
	12/01/04		8.39	83.24
	03/01/05		7.84	83.79
	06/01/05		8.07	83.56

1. Referenced to top of casing elevation of Blue Lake Market well MW-1

2. Below top of casing

3. In feet, relative to Blue Lake Market well MW-1 top of casing elevation

4. Top of casing elevation surveyed relative mean sea level

5. NA: Not Available

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-101	12/1/99	<50 <sup>4</sup>	<0.50	<0.50	<0.50	<0.50	<0.50	NA <sup>5</sup>	<0.50	<10	<1.0	<1.0	<1.0
	3/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	NA	NA	NA	NA
	9/1/00	NS <sup>6</sup>	NS	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS
	12/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/4/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/3/01	160	<0.50	<4.0	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/02	<50	<0.50	<4.0	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/2/02	64	<0.50	<2.8	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/3/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/2/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/2/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/03	<50	<0.50	<1.4	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/2/04	90	<0.50	<3.0	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	12/1/04	Not Sampled											
	3/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
MW-102	12/1/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<10	<1.0	<1.0	<1.0
	3/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	NA	NA	NA	NA
	9/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA
	12/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-102 (cont'd)	6/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/4/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/3/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/2/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/3/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<3.0	NA	NA	NA
	6/2/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/2/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<3.0	NA	NA	NA	NA
	12/1/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/2/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	12/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
MW-103	12/1/99	2,200	27	14	26	47	11	NA	<1.0	<20	<2.0	<2.0	<2.0
	3/1/00	3,200 <sup>7</sup>	47	93	55	130	47	NA	<30	NA	NA	NA	NA
	6/1/00	2,200	12	7.3	24	30	12	<20	<0.50	NA	NA	NA	NA
	9/1/00	2,300	23	2.8	18	12	1.2	NA	<0.50	NA	NA	NA	NA
	12/1/00	4,900	43	48	50	73	14	<80	NA	NA	NA	NA	NA
	3/1/01	2,900	27	37	35	49	14	NA	<60	NA	NA	NA	NA
	6/1/01	3,200	42	<80	16	21	9.4	NA	<30	NA	NA	NA	NA
	9/4/01	1,300	18	<40	7.9	5.4	<3.0	NA	<32	NA	NA	NA	NA
	12/3/01	5,700	150	160	95	180	39	NA	<150	NA	NA	NA	NA
	3/1/02	5,700	100	170	83	260	120	NA	<150	NA	NA	NA	NA
	6/3/02	13,900	25	<110	35	33	17	NA	<3.0	NA	NA	NA	NA
	9/3/02	1,600	21	<35	11	7	<5.0	NA	<30	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-103 (cont'd)	12/2/02	5,700	280	110	190	300	36	NA	<120	NA	NA	NA	NA
	3/3/03	4,400	47	<200	74	170	59	NA	NA	NA	NA	NA	NA
	6/2/03	2,400	14	<70	15	12	5.3	NA	<30	NA	NA	NA	NA
	9/2/03	1,500	18	<45	13	9.5	<5.0	<10	<30	NA	NA	NA	NA
	12/1/03	3,500	49	<90	48	49	9.6	NA	NA	NA	NA	NA	NA
	3/1/04	5,800	100	160	130	260	83	NA	NA	NA	NA	NA	NA
	6/1/04	2,100	15	<110	32	26	14	NA	NA	NA	NA	NA	NA
	9/2/04	3,700	55	49	140	150	18	NA	NA	NA	NA	NA	NA
	12/1/04	2,400	42	40	41	39	8.4	NA	NA	NA	NA	NA	NA
	3/1/05	3,700	58	82	67	92	33	NA	NA	NA	NA	NA	NA
MW-104	6/1/05	2,700	33	47	46	66	13	NA	NA	NA	NA	NA	NA
	12/1/99	33,000	520	590	1,500	4,300	350	NA	<25.0	<500	<50.0	<50.0	<50.0
	3/1/00	15,000 <sup>7</sup>	330	460	770	2,100	210	NA	<300	NA	NA	NA	NA
	6/1/00	16,000	260	490	770	1,900	200	<20	<10	NA	NA	NA	NA
	9/1/00	6,600	43	45	190	260	19	NA	<1.0	NA	NA	NA	NA
	12/1/00	34,000	550	440	1,300	3,400	200	<300	NA	NA	NA	NA	NA
	3/1/01	18,000	350	440	740	1,700	170	NA	<600	NA	NA	NA	NA
	6/1/01	17,000	260	320	540	1,400	110	NA	<300	NA	NA	NA	NA
	9/4/01	9,800	120	<200	330	510	36	NA	<400	NA	NA	NA	NA
	12/3/01	33,000	870	520	1600	4,400	250	NA	<900	NA	NA	NA	NA
	3/1/02	20,000	400	450	930	2,300	180	NA	<650	NA	NA	NA	NA
	6/3/02	21,000	370	880	890	2,300	310	NA	<80	NA	NA	NA	NA
	9/3/02	7,400	100	<200	270	320	41	NA	<150	NA	NA	NA	NA
	12/2/02	13,000	260	210	630	1,100	91	NA	<320	NA	NA	NA	NA
	3/3/03	20,000	430	560	950	2,100	230	NA	NA	NA	NA	NA	NA
	6/2/03	26,000	540	1,100	1,300	3,100	530	NA	<600	NA	NA	NA	NA
	9/2/03	6,100	100	110	260	420	59	<10	<300	NA	NA	NA	NA
	12/1/03	25,000	760	520	1,300	2,500	200	NA	NA	NA	NA	NA	NA
	3/1/04	21,000	400	460	1,000	1,800	210	NA	NA	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-104 (cont'd)	6/1/04	26,000	500	680	1,200	2,100	320	NA	NA	NA	NA	NA	NA
	12/1/04	16,000	430	460	990	1,900	190	NA	NA	NA	NA	NA	NA
	3/1/05	17,000	200	350	590	1,100	180	NA	NA	NA	NA	NA	NA
	6/1/05	13,000	130	230	490	870	140	NA	NA	NA	NA	NA	NA
MW-105	12/1/99	2,000	4.0	1.7	12	2.1	<0.50	NA	<0.50	<10	<1.0	<1.0	<1.0
	3/1/00	610 <sup>7</sup>	<3.0	<15	<3.0	<2.0	<1.0	NA	<3.0	NA	NA	NA	NA
	6/1/00	460	<0.50	<0.50	0.65	<0.50	<0.50	<20	<0.50	NA	NA	NA	NA
	9/1/00	830	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA
	12/1/00	3,100 <sup>7</sup>	<12	<25	8.0	3.0	0.71	<20	NA	NA	NA	NA	NA
	3/1/01	890	<3.0	<10 <sup>8</sup>	2.0	<2.0 <sup>8</sup>	<0.50	NA	<20	NA	NA	NA	NA
	6/1/01	430	<0.50	<7.0	<1.2	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/4/01	650	<4.0	<9.0	<1.5	<1.2	<1.0	NA	<13	NA	NA	NA	NA
	12/3/01	4,700	11	<40	18	6.3	1.8	NA	<100	NA	NA	NA	NA
	3/1/02	260	1.7	<6.0	<0.50	<0.50	<0.50	NA	<6.0	NA	NA	NA	NA
	6/3/02	140 <sup>7</sup>	<0.50	<3.0 <sup>9</sup>	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/3/02	360 <sup>7</sup>	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/2/02	680	6.0	<11	2.1	0.82	<2.0	NA	<13	NA	NA	NA	NA
	3/3/03	280	<1.5	<5.5	<1.0	<1.0	<0.50	NA	NA	NA	NA	NA	NA
	6/2/03	210	<0.50	<5.5	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/2/03	250	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<3.0	NA	NA	NA	NA
	12/1/03	1,500	<5.0	<40	3.8	1.6	<1.5	NA	NA	NA	NA	NA	NA
	3/1/04	390	<2.0	<17	0.93	0.53	<0.5	NA	NA	NA	NA	NA	NA
	6/1/04	210	<0.50	<12	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/2/04	210	<0.50	<9	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	12/1/04	590	<2.0	<18	1.3	0.73	<1.0	NA	NA	NA	NA	NA	NA
	3/1/05	680	<2.5	<30	<2.0	<1.5	<1.0	NA	NA	NA	NA	NA	NA
	6/1/05	510	1.7	9.8	0.50	0.57	<0.50	NA	NA	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-106	12/1/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<10	<1.0	<1.0	<1.0
	3/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	NA	NA	NA	NA
	9/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA
	12/1/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/1/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/4/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/3/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/1/02	<50	0.74	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/3/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	12/2/02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	3/3/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/2/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	9/2/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<3.0	NA	NA	NA	NA
	12/1/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/2/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	12/1/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/1/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
MW-1 <sup>10</sup>	12/3/01	71	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<1.0	NA	NA	NA	NA
	3/1/02	420	11	<0.50	5.4	3.8	<0.50	NA	<27	NA	NA	NA	NA
	6/3/02	2,400 <sup>7</sup>	63	32	49	30	9	NA	<70	NA	NA	NA	NA
	9/3/02	3,800 <sup>7</sup>	210	<70	29	<25	<12	NA	<110	NA	NA	NA	NA
	1/2/03	400	<2.0	<4.0		<0.50	<1.0	NA	<10	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-1 <sup>10</sup> (cont'd)	3/3/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<3.0	NA	NA	NA	NA
	6/2/03	1,300	43	<30	29	9.6	<8.0	NA	<30	NA	NA	NA	NA
	9/11/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/03	1,500	38	<20	19	14	<4.0	NA	<80	NA	NA	NA	NA
	3/1/04												
	6/7/04												
	9/2/04	1,000	37	<19	<5.0	<3.0 <sup>11</sup>	<3.0 <sup>11</sup>	NA	<40	NA	NA	NA	NA
	12/1/04	330	4.8	<4.0	1.7	0.91	<1.0	NA	NA	NA	NA	NA	NA
	3/1/05	990	<10	<15	<15	<7.0	<3.0	NA	<35	NA	NA	NA	NA
	6/1/05	2,600	27	<30	18	10	<5.0	NA	<80	NA	NA	NA	NA
MW-2 <sup>10</sup>	12/3/01	4,700	7.3	42	110	500	150	NA	<1.0	NA	NA	NA	NA
	3/1/02	15,000	29	290	640	2,000	600	NA	<70	NA	NA	NA	NA
	6/3/02	3,400 <sup>7</sup>	9.8	21	87	190	63	NA	<11	NA	NA	NA	NA
	9/3/02	NS	NS	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS
	1/2/03	12,000	<25	97	470	1,700	210	NA	<150	NA	NA	NA	NA
	3/3/03	270	<0.50	<5.5	2.4	8.1	4.2	NA	<3.0	NA	NA	NA	NA
	6/2/03	860	0.75	6.6	28	63	12	NA	<3.0	NA	NA	NA	NA
	9/11/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/03	6,700	14	52	330	970	160	NA	<30	NA	NA	NA	NA
	3/1/04												
MW-3 <sup>10</sup>	6/7/04												
	9/2/04	2,600	16	26	92	258 <sup>11</sup>	258 <sup>11</sup>	NA	<3.0	NA	NA	NA	NA
	12/1/04	2,200	5.2	15	110	270	21	NA	NA	NA	NA	NA	NA
	3/1/05	1,100	<2.0	10	19	48	7.9	NA	<3.0	NA	NA	NA	NA
	6/1/05	970	1.1	<15	9	17	4.1	NA	<3.0	NA	NA	NA	NA
	12/3/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<1.0	NA	NA	NA	NA
	3/1/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/02	8,100	28	<140	69	130	17	NA	<250	NA	NA	NA	NA

**Table B-2**  
**Historic Groundwater Contaminant Levels**  
**Blue Lake Belting & Leather Works, Blue Lake, California**  
(in ug/L)<sup>1</sup>

Well Location	Sampling Date	TPHG <sup>2</sup>	Benzene	Toluene	Ethyl-Benzene	m,p-Xylene	o-Xylene	Dissolved Lead	MTBE <sup>3</sup>	TBA <sup>3</sup>	DIPE <sup>3</sup>	ETBE <sup>3</sup>	TAME <sup>3</sup>
MW-3 <sup>10</sup> (cont'd)	9/3/02	NS	NS	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS
	1/2/03	23,000	390	2,700	810	3,000	1,000	NA	<150	NA	NA	NA	NA
	3/3/03	7,500	32	<180	62	360	55	NA	<200	NA	NA	NA	NA
	6/2/03	5,600	36	<110	86	160	20	NA	<170	NA	NA	NA	NA
	9/11/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/03	10,000	77	120	200	540	54	NA	<400	NA	NA	NA	NA
	3/1/04	Data Not Available											
	6/7/04	Data Not Available											
	9/2/04	4,500	59	50	73	109 <sup>11</sup>	109 <sup>11</sup>	NA	<140	NA	NA	NA	NA
	12/1/04	7,500	120	340	180	470	84	NA	NA	NA	NA	NA	NA
	3/1/05	11,000	160	690	370	790	220	NA	NA	NA	NA	NA	NA
	6/1/05	10,000	120	480	340	650	170	NA	NA	NA	NA	NA	NA

1. ug/L: micrograms per Liter

2. TPHG: Total Petroleum Hydrocarbons as Gasoline

3. MTBE: Methyl Tertiary-Butyl Ether; TBA: Tertiary-Butyl Alcohol; DIPE: Diisopropyl Ether; ETBE: Ethyl Tertiary-Butyl Ether; TAME: Tertiary-Amyl Methyl Ether

4. <: Denotes a value that is "less than" the method detection limit.

5. NA: Not Applicable/Analyzed/Available

6. NS: Not Sampled

7. Samples do not have the typical pattern of fresh gasoline. However, the results represent the amount of material in the gasoline range.

8. Results for samples are reported ND with a dilution due to matrix interference.

9. Reporting limits raised due to matrix interference.

10. Well sampled by LACO Associates for Blue Lake Market.

11. Analytical result represents total xylenes.

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-101	12/01/99	1.98	40	0	NA <sup>9</sup>	27.1	380	15	0.97	NA
	03/01/00	3.67	40	280	55	<7.89 <sup>10</sup>	<100	13	1.5	28
	06/01/00	1.15	40	235	45	<7.89	<100	10	1.3	16
	09/01/00	0.55	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/00	0.83	40	165	NA	NA	NA	NA	NA	NA
	03/01/01	1.35	25	97	NA	NA	NA	NA	NA	NA
	06/01/01	0.38	30	112	NA	NA	NA	NA	NA	NA
	09/04/01	0.49	NA	90	NA	NA	NA	NA	NA	NA
	12/03/01	0.74	30	106	NA	NA	NA	NA	NA	NA
	03/01/02	1.23	30	172	NA	NA	NA	NA	NA	NA
	06/03/02	0.86	30	117	NA	NA	NA	NA	NA	NA
	09/03/02	1.34	NA	164	NA	NA	NA	NA	NA	NA
	12/02/02	0.73	50	175	NA	NA	NA	NA	NA	NA
	03/03/03	1.21	25	242	NA	NA	NA	NA	NA	NA
	06/02/03	1.52	40	240	NA	NA	NA	NA	NA	NA
	09/02/03	1.47	45	203	NA	NA	NA	NA	NA	NA
	12/01/03	1.75	30	251	NA	NA	NA	NA	NA	NA
	03/01/04	2.39	15	270	NA	NA	NA	NA	NA	NA
	06/01/04	0.98	30	191	NA	NA	NA	NA	NA	NA
	09/02/04	1.12	35	117	NA	NA	NA	NA	NA	NA
MW-102	12/01/99	3.40	30	13	NA	<7.89	<100	11	1.3	NA
	03/01/00	4.16	20	305	32	<7.89	<100	7.5	1.4	<2.0
	06/01/00	3.20	20	245	31	<7.89	<100	7	0.74	<2.0

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-102 (cont'd)	09/01/00	1.72	30	155	NA	<7.89	<15	5.8	0.77	NA
	12/01/00	4.08	30	165	NA	NA	NA	NA	NA	NA
	03/01/01	3.08	20	55	NA	NA	NA	NA	NA	NA
	06/01/01	2.96	30	158	NA	NA	NA	NA	NA	NA
	09/04/01	1.63	20	97	NA	NA	NA	NA	NA	NA
	12/03/01	3.18	20	NA	NA	NA	NA	NA	NA	NA
	03/01/02	3.84	20	159	NA	NA	NA	NA	NA	NA
	06/03/02	3.49	25	130	NA	NA	NA	NA	NA	NA
	09/03/02	1.64	15	162	NA	NA	NA	NA	NA	NA
	12/02/02	1.35	25	180	NA	NA	NA	NA	NA	NA
	03/03/03	4.10	20	249	NA	NA	NA	NA	NA	NA
	06/02/03	3.91	30	231	NA	NA	NA	NA	NA	NA
	09/02/03	2.04	15	231	NA	NA	NA	NA	NA	NA
	12/01/03	3.37	25	254	NA	NA	NA	NA	NA	NA
	03/01/04	3.46	15	278	NA	NA	NA	NA	NA	NA
MW-103	06/01/04	3.18	30	185	NA	NA	NA	NA	NA	NA
	09/02/04	1.46	20	102	NA	NA	NA	NA	NA	NA
	12/01/04	4.64	20	158	NA	NA	NA	NA	NA	NA
	03/01/05	4.51	25	158	NA	NA	NA	NA	NA	NA
	06/01/05	2.93	15	175	NA	NA	NA	NA	NA	NA
	12/01/99	0.74	40	3	NA	396	2,900	3.8	<0.10	NA
	03/01/00	1.18	30	10	55	377	3,200	3.5	<0.10	390
	06/01/00	0.48	40	15	45	137	2,700	3.2	<0.50	320
	09/01/00	0.47	80	5	NA	133	1,900	2.4	<0.10	NA
	12/01/00	0.71	70	-35	NA	NA	NA	NA	NA	NA
	03/01/01	0.28	30	73	NA	NA	NA	NA	NA	NA

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-103 (cont'd)	06/01/01	0.12	40	165	NA	NA	NA	NA	NA	NA
	09/04/01	0.15	80	80	NA	NA	NA	NA	NA	NA
	12/03/01	0.34	35	112	NA	NA	NA	NA	NA	NA
	03/01/02	0.72	40	156	NA	NA	NA	NA	NA	NA
	06/03/02	0.35	35	150	NA	NA	NA	NA	NA	NA
	09/03/02	0.23	65	146	NA	NA	NA	NA	NA	NA
	12/02/02	0.49	60	198	NA	NA	NA	NA	NA	NA
	03/03/03	0.78	30	252	NA	NA	NA	NA	NA	NA
	06/02/03	1.30	125	208	NA	NA	NA	NA	NA	NA
	09/02/03	1.09	60	239	NA	NA	NA	NA	NA	NA
	12/01/03	0.98	35	274	NA	NA	NA	NA	NA	NA
	03/01/04	0.72	35	275	NA	NA	NA	NA	NA	NA
	06/01/04	0.55	70	54	NA	NA	NA	NA	NA	NA
	09/02/04	0.54	70	21	NA	NA	NA	NA	NA	NA
	12/01/04	1.43	35	73	NA	NA	NA	NA	NA	NA
MW-104	03/01/05	2.74	40	105	NA	NA	NA	NA	NA	NA
	06/01/05	0.80	35	-6	NA	NA	NA	NA	NA	NA
	12/01/99	0.80	60	10	NA	2740	3,600	4.4	<0.10	NA
	03/01/00	0.61	25	215	66	4756	4,700	3.9	<0.10	990
	06/01/00	0.44	30	115	64	1958	4,100	3	<0.50	930
	09/01/00	0.52	40	75	NA	758	3,000	1.8	<0.10	NA
	12/01/00	1.00	60	25	NA	NA	NA	NA	NA	NA
	03/01/01	0.50	40	57	NA	NA	NA	NA	NA	NA
	06/01/01	0.23	40	170	NA	NA	NA	NA	NA	NA
	09/04/01	0.24	50	65	NA	NA	NA	NA	NA	NA
	12/03/01	0.23	50	124	NA	NA	NA	NA	NA	NA

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-104 (cont'd)	03/01/02	0.35	35	167	NA	NA	NA	NA	NA	NA
	06/03/02	0.51	30	141	NA	NA	NA	NA	NA	NA
	09/03/02	0.26	40	143	NA	NA	NA	NA	NA	NA
	12/02/02	0.48	40	187	NA	NA	NA	NA	NA	NA
	03/03/03	0.75	30	241	NA	NA	NA	NA	NA	NA
	06/02/03	1.25	55	265	NA	NA	NA	NA	NA	NA
	09/02/03	1.13	65	238	NA	NA	NA	NA	NA	NA
	12/01/03	0.56	40	278	NA	NA	NA	NA	NA	NA
	03/01/04	0.79	30	272	NA	NA	NA	NA	NA	NA
	06/01/04	0.62	110	51	NA	NA	NA	NA	NA	NA
	09/02/04	0.58	20	34	NA	NA	NA	NA	NA	NA
	12/01/04	1.60	30	75	NA	NA	NA	NA	NA	NA
	03/01/05	8.12	20	90	NA	NA	NA	NA	NA	NA
	06/01/05	0.74	35	37	NA	NA	NA	NA	NA	NA
MW-105	12/01/99	0.77	70	5	NA	122	2,100	4.3	<0.10	NA
	03/01/00	1.76	20	320	59	11.2	420	6.6	0.88	470
	06/01/00	1.45	20	265	36	18.9	440	5.9	0.59	160
	09/01/00	0.48	NA	30	NA	43.1	530	3.7	0.25	NA
	12/01/00	0.98	70	-15	NA	NA	NA	NA	NA	NA
	03/01/01	0.77	20	99	NA	NA	NA	NA	NA	NA
	06/01/01	0.94	30	140	NA	NA	NA	NA	NA	NA
	09/04/01	0.21	70	103	NA	NA	NA	NA	NA	NA
	12/03/01	0.42	50	124	NA	NA	NA	NA	NA	NA
	03/01/02	0.95	20	179	NA	NA	NA	NA	NA	NA
	06/03/02	1.19	25	145	NA	NA	NA	NA	NA	NA
	09/03/02	0.28	100	165	NA	NA	NA	NA	NA	NA

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-105 (cont'd)	12/02/02	0.58	50	202	NA	NA	NA	NA	NA	NA
	03/03/03	1.40	20	252	NA	NA	NA	NA	NA	NA
	06/02/03	1.64	45	254	NA	NA	NA	NA	NA	NA
	09/02/03	1.10	40	232	NA	NA	NA	NA	NA	NA
	12/01/03	3.80	35	273	NA	NA	NA	NA	NA	NA
	03/01/04	0.72	15	278	NA	NA	NA	NA	NA	NA
	06/01/04	1.23	20	183	NA	NA	NA	NA	NA	NA
	09/02/04	0.64	50	75	NA	NA	NA	NA	NA	NA
	12/01/04	1.78	45	45	NA	NA	NA	NA	NA	NA
	03/01/05	0.88	35	165	NA	NA	NA	NA	NA	NA
MW-106	06/01/05	0.99	15	162	NA	NA	NA	NA	NA	NA
	12/01/99	0.72	40	2	NA	<7.89	<100	7.9	0.61	NA
	03/01/00	0.77	30	105	48	<7.89	1,100	7.5	0.59	960
	06/01/00	0.55	30	215	36	<7.89	<100	7.3	0.58	270
	09/01/00	0.65	NA	160	NA	<7.89	<15	6.2	0.37	NA
	12/01/00	1.45	60	140	NA	NA	NA	NA	NA	NA
	03/01/01	1.28	30	125	NA	NA	NA	NA	NA	NA
	06/01/01	0.96	30	49	NA	NA	NA	NA	NA	NA
	09/04/01	0.30	25	40	NA	NA	NA	NA	NA	NA
	12/03/01	0.47	35	67	NA	NA	NA	NA	NA	NA
	03/01/02	0.55	30	152	NA	NA	NA	NA	NA	NA
	06/03/02	0.84	30	79	NA	NA	NA	NA	NA	NA
	09/03/02	0.47	35	94	NA	NA	NA	NA	NA	NA
	12/02/02	2.37	35	141	NA	NA	NA	NA	NA	NA
	03/03/03	0.80	30	218	NA	NA	NA	NA	NA	NA
	06/02/03	1.76	35	219	NA	NA	NA	NA	NA	NA

**Table B-3**  
**Historic Natural Attenuation Parameters**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Well Location	Sampling Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>	Alkalinity (mg/L CaCO <sub>3</sub> ) <sup>6</sup>	Dissolved Methane (ug/L) <sup>7</sup>	Dissolved Iron (ug/L)	Sulfate (mg/L) <sup>8</sup>	Nitrate (mg/L)	Dissolved Manganese (ug/L)
MW-106 (cont'd)	09/02/03	1.91	30	145	NA	NA	NA	NA	NA	NA
	12/01/03	0.90	30	232	NA	NA	NA	NA	NA	NA
	03/01/04	1.46	15	254	NA	NA	NA	NA	NA	NA
	06/01/04	1.42	60	138	NA	NA	NA	NA	NA	NA
	09/02/04	1.25	25	113	NA	NA	NA	NA	NA	NA
	12/01/04	2.23	45	176	NA	NA	NA	NA	NA	NA
	03/01/05	1.43	30	68	NA	NA	NA	NA	NA	NA
	06/01/05	1.34	15	120	NA	NA	NA	NA	NA	NA
MW-3	03/01/05	0.74	45	27	NA	NA	NA	NA	NA	NA
	06/01/05	0.73	30	4	NA	NA	NA	NA	NA	NA

1. DO: Dissolved Oxygen, field measured using portable instrumentation
2. ppm: Measurement concentration, in parts per million
3. DCO<sub>2</sub>: Dissolved Carbon Dioxide, field measured using a field test kit
4. ORP: Oxidation-Reduction Potential measured using portable instrumentation
5. mV: millivolts
6. mg/L CaCO<sub>3</sub>: milligrams per Liter of Calcium Carbonate
7. ug/L: micrograms per Liter
8. mg/L: milligrams per Liter
9. NA: Not Measured or Not Available
10. <: Denotes a value that is "less than" the method detection limit

**Table B-4**  
**Ozone System Monitoring**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Date	Total System Run Time (hours:minutes)	Ozone Flow (scfh) <sup>1</sup>	Ozone Pressure (psi) <sup>2</sup>	Electric Meter (kWhr) <sup>3</sup>	SW-1				SW-2		
					Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)
12/21/04	2:52	8	9	0	1.3	8	0:39	0:00	1.0	16	0:19
12/31/04	221:33	5	13	397	1.0	20	0:39	0:00	0.8	25	0:19
01/07/05	389:27	5	12.5	520	NM	22	0:40	0:00	NM	30	0:20
01/17/05	630:58	5	12.5	830	0.9	16	0:41	0:00	0.9	15	0:21
01/21/05	725:30	5	13	NM	0.9	10	0:43	0:00	0.9	11	0:23
01/28/05	893:11	5	13.5	1286	1.1	7	0:44	0:00	0.8	17	0:24
02/03/05	1040:48	9.5	9.5	1381	1.1	7	0:49	0:05	0.8	17	0:26
03/01/05	1655:53	9	8.5	2185	1.2	6.5	41:54	0:05	1.1	12	41:28
04/15/05	2730:03	5	11	3536	1.2	5	113:27	0:05	1.2	7	113:30
05/12/05	3365:53	5.5	11	4323	1.2	5	155:49	0:05	1.1	7	155:29
06/03/05	3886:14	9	8.5	4968	1.2	5	190:31	0:05	1.1	7.5	190:15

**Table B-4**  
**Ozone System Monitoring**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Programmed Run Time (hours:minutes)	Date	SW-3				SW-4				SW-5	
		Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Flow (scfh)	Pressure (psi)
0:00	12/21/04	1.1	14	0:15	0:05	1.1	12	0:16	0:05	1.1	14
0:00	12/31/04	1.3	20	44:15	0:05	1.1	20	44:06	0:05	1.2	20
0:00	01/07/05	NM	19	77:55	0:05	NM	19	77:37	0:05	NM	19
0:00	01/17/05	1.1	7	126:10	0:05	1.1	8	125:59	0:05	1.1	8
0:00	01/21/05	1.1	5	145:06	0:05	1.1	7	144:51	0:05	1.1	9
0:00	01/28/05	1.1	8	178:40	0:05	1.1	8	178:22	0:05	1.1	9
0:05	02/03/05	1.1	7	208:32	0:10	1.1	7	207:47	0:10	1.1	9
0:05	03/01/05	1.2	9	290:31	0:10	1.1	9	289:38	0:10	1.1	10
0:05	04/15/05	1.2	8	433:41	0:10	1.1	7	432:58	0:10	1.2	8
0:05	05/12/05	1.1	8	518:32	0:10	1.1	7	517:49	0:10	1.1	7
0:05	06/01/05	1.05	8	587:56	0:10	1.1	7	587:13	0:10	1.2	4.5

**Table B-4**  
**Ozone System Monitoring**  
**Blue Lake Belting & Leather Works, Blue Lake, California**

Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Date	SW-6				SW-7				Flow (scfh)
			Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	
0:14	0:05	12/21/04	1.0	16	0:11	0:05	0.9	18	0:09	0:00	1.1
43:56	0:05	12/31/04	1.2	20	43:42	0:05	0.9	22	0:09	0:00	0.8
77:27	0:05	1/7/05	NM	19	77:18	0:05	NM	21	0:10	0:00	NM
125:48	0:05	1/17/05	1.1	8	125:35	0:05	0.9	15	0:11	0:00	0.8
144:39	0:05	1/21/05	1.1	8	144:30	0:05	0.9	16	0:12	0:00	0.9
178:10	0:05	1/28/05	1.1	9	178:01	0:05	0.9	15	0:13	0:00	1.1
207:31	0:10	2/3/05	1.1	9	207:22	0:10	0.9	17	0:15	0:05	1.0
289:34	0:10	3/1/05	1.1	11	289:22	0:10	1.0	14	41:16	0:05	1.0
432:44	0:10	4/15/05	1.0	10	432:32	0:10	1.1	8	112:51	0:05	1.3
517:35	0:10	5/12/05	0.9	10	517:23	0:10	1.1	8	155:17	0:05	1.3
586:59	0:10	6/1/05	1.0	10	586:47	0:10	1.1	7.5	189:53	0:05	1.2

**Table B-4**  
**Ozone System Monitoring**  
**Blue Lake Belting & leather works, Blue Lake, California**

Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Date	SW-9				SW-10			
				Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)	Flow (scfh)	Pressure (psi)	Total Run Time (hours:minutes)	Programmed Run Time (hours:minutes)
15	0:16	0:00	12/21/04	1.3	7	0:12	0:00	1.1	15	0:21	0:05
23	0:16	0:00	12/31/04	1.2	20	0:12	0:00	1.2	20	43:59	0:05
21	0:17	0:00	01/07/05	NM	15	0:13	0:00	NM	15	77:30	0:05
16	0:18	0:00	01/17/05	1.1	6	0:14	0:00	1.1	6	125:41	0:05
16	0:19	0:00	01/21/05	1.1	6	0:15	0:00	1.1	6	144:32	0:05
10	0:20	0:00	01/28/05	1.2	7	0:16	0:00	1.1	6	178:01	0:05
14	0:22	0:05	02/03/05	1.0	6	0:18	0:05	1.1	8	207:26	0:10
13	41:23	0:05	03/01/05	1.2	8	41:18	0:05	1.1	12	289:29	0:10
2.25	112:58	0:05	04/15/05	1.2	6	112:53	0:05	1.2	7	432:29	0:10
3	155:19	0:05	05/12/05	1.1	6	155:19	0:05	1.1	8	517:21	0:10
3	190:00	0:05	06/01/05	1.1	6	189:55	0:05	1.0	7.5	586:45	0:10

1. scfh: standard cubic feet per hour

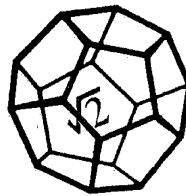
2. psi: pounds per square inch

3. kWhr: kilowatt hour

## **Appendix C**

---

## **Laboratory Analytical Reports**



**NORTH COAST  
LABORATORIES LTD.**

June 14, 2005

SHN Consulting Engineers and Geologists  
812 West Wabash Avenue  
Eureka, CA 95501

Attn: Mike Foget

RE: 097309, Blue Lake Belting and Leather

Order No.: 0506009  
Invoice No.: 50686  
PO No.:  
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

Fraction Client Sample Description

01A	MW-106
02A	MW-101
03A	MW-102
04A	MW-105
05A	MW-103
06A	MW-3
07A	MW-104

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.  
Laboratory Director

**CLIENT:** SHN Consulting Engineers and Geologists  
**Project:** 097309, Blue Lake Belting and Leather  
**Lab Order:** 0506009

**CASE NARRATIVE****TPH as Gasoline:**

Samples MW-3 and MW-104 appear to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.

The gasoline values for samples MW-105 and MW-103 include the reported gasoline components in addition to other peaks in the gasoline range.

Date: 14-Jun-05  
WorkOrder: 0506009

## ANALYTICAL REPORT

Client Sample ID: MW-106  
Lab ID: 0506009-01A

Received: 6/1/05

Collected: 6/1/05 11:40

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	ND	0.50	µg/L	1.0		6/9/05
Toluene	ND	0.50	µg/L	1.0		6/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		6/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		6/9/05
o-Xylene	ND	0.50	µg/L	1.0		6/9/05
Surrogate: Cis-1,2-Dichloroethylene	95.7	85-115	% Rec	1.0		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		6/9/05

Client Sample ID: MW-101

Received: 6/1/05

Collected: 6/1/05 12:15

Lab ID: 0506009-02A

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	ND	0.50	µg/L	1.0		6/9/05
Toluene	ND	0.50	µg/L	1.0		6/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		6/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		6/9/05
o-Xylene	ND	0.50	µg/L	1.0		6/9/05
Surrogate: Cis-1,2-Dichloroethylene	97.4	85-115	% Rec	1.0		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		6/9/05

Date: 14-Jun-05  
WorkOrder: 0506009

## ANALYTICAL REPORT

Client Sample ID: MW-102  
Lab ID: 0506009-03A

Received: 6/1/05

Collected: 6/1/05 12:50

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	ND	0.50	µg/L	1.0		6/9/05
Toluene	ND	0.50	µg/L	1.0		6/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		6/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		6/9/05
o-Xylene	ND	0.50	µg/L	1.0		6/9/05
Surrogate: Cis-1,2-Dichloroethylene	93.1	85-115	% Rec	1.0		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		6/9/05

Client Sample ID: MW-105

Received: 6/1/05

Collected: 6/1/05 13:25

Lab ID: 0506009-04A

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	1.7	0.50	µg/L	1.0		6/9/05
Toluene	9.8	0.50	µg/L	1.0		6/9/05
Ethylbenzene	0.50	0.50	µg/L	1.0		6/9/05
m,p-Xylene	0.57	0.50	µg/L	1.0		6/9/05
o-Xylene	ND	0.50	µg/L	1.0		6/9/05
Surrogate: Cis-1,2-Dichloroethylene	98.1	85-115	% Rec	1.0		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	510	50	µg/L	1.0		6/9/05

Date: 14-Jun-05  
WorkOrder: 0506009

## ANALYTICAL REPORT

Client Sample ID: MW-103  
Lab ID: 0506009-05A

Received: 6/1/05

Collected: 6/1/05 14:00

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	33	5.0	µg/L	10		6/9/05
Toluene	47	5.0	µg/L	10		6/9/05
Ethylbenzene	46	5.0	µg/L	10		6/9/05
m,p-Xylene	66	5.0	µg/L	10		6/9/05
o-Xylene	13	5.0	µg/L	10		6/9/05
Surrogate: Cis-1,2-Dichloroethylene	102	85-115	% Rec	10		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	2,700	500	µg/L	10		6/9/05

Client Sample ID: MW-3  
Lab ID: 0506009-06A

Received: 6/1/05

Collected: 6/1/05 14:50

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	120	25	µg/L	50		6/10/05
Toluene	480	250	µg/L	500		6/9/05
Ethylbenzene	340	25	µg/L	50		6/10/05
m,p-Xylene	650	25	µg/L	50		6/10/05
o-Xylene	170	25	µg/L	50		6/10/05
Surrogate: Cis-1,2-Dichloroethylene	87.0	85-115	% Rec	500		6/9/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	10,000	2,500	µg/L	50		6/10/05

Date: 14-Jun-05  
WorkOrder: 0506009

## ANALYTICAL REPORT

Client Sample ID: MW-104  
Lab ID: 0506009-07A

Received: 6/1/05

Collected: 6/1/05 15:00

Test Name: BTEX

Reference: EPA 5030/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Benzene	130	25	µg/L	50		6/10/05
Toluene	230	25	µg/L	50		6/10/05
Ethylbenzene	490	25	µg/L	50		6/10/05
m,p-Xylene	870	500	µg/L	1,000		6/10/05
o-Xylene	140	25	µg/L	50		6/10/05
Surrogate: Cis-1,2-Dichloroethylene	104	85-115	% Rec	1,000		6/10/05

Test Name: TPH as Gasoline

Reference: EPA 5030/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	13,000	2,500	µg/L	50		6/10/05

## North Coast Laboratories, Ltd.

Date: 14-Jun-05

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0506009  
**Project:** 097309, Blue Lake Belting and Leather

### QC SUMMARY REPORT

Method Blank

Sample ID	MB-6/8/05	Batch ID:	R35279	Test Code:	BTXEW	Units:	µg/L	Analysis Date	6/9/05 11:08:09 AM	Prep Date		
Client ID:		Run ID:		SeqNo:				SeqNo:	509723			
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
Benzene		ND	0.50									
Toluene		ND	0.50									
Ethylbenzene		ND	0.50									
m,p-Xylene		ND	0.50									
o-Xylene		ND	0.50									
Cis-1,2-Dichloroethylene		0.880	0.10	1.00	0	88.0%	85	115	0			
Sample ID	MB-6/8/05	Batch ID:	R35277	Test Code:	TPHCGW	Units:	µg/L	Analysis Date	6/9/05 11:08:09 AM	Prep Date		
Client ID:		Run ID:		SeqNo:				SeqNo:	509695			
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
TPHC Gas (C6-C14)		ND	50									

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## North Coast Laboratories, Ltd.

Date: 14-Jun-05

CLIENT: SHN Consulting Engineers and Geologists

Work Order: 0506009

Project: 097309, Blue Lake Belting and Leather

**QC SUMMARY REPORT**

Laboratory Control Spike

<b>QC SUMMARY REPORT</b>										Prep Date
Laboratory Control Spike										
Sample ID	LCS-05374	Batch ID:	R35279	Test Code:	BTXEW	Units:	µg/L	Analysis Date	6/8/05 2:29:41 PM	Prep Date
Client ID:			Run ID:	ORGCB_0506008B				SeqNo:	509720	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene	4.956	0.50	5.00	0	99.2%	85	115	115	0	0
Toluene	5.024	0.50	5.00	0	100%	85	115	115	0	0
Ethylbenzene	4.986	0.50	5.00	0	99.7%	85	115	115	0	0
mP-Xylene	10.01	0.50	10.0	0	100%	85	115	115	0	0
o-Xylene	5.016	0.50	5.00	0	100%	85	115	115	0	0
Cis-1,2-Dichloroethylene	1.04	0.10	1.00	0	104%	85	115	115	0	0
Sample ID	LCS-05374	Batch ID:	R35279	Test Code:	BTXEW	Units:	µg/L	Analysis Date	6/8/05 3:05:07 PM	Prep Date
Client ID:			Run ID:	ORGCB_0506008B				SeqNo:	509721	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene	4.875	0.50	5.00	0	97.5%	85	115	115	4.96	1.69%
Toluene	4.945	0.50	5.00	0	98.9%	85	115	115	5.02	1.59%
Ethylbenzene	4.912	0.50	5.00	0	98.2%	85	115	115	4.99	1.50%
mP-Xylene	9.846	0.50	10.0	0	98.5%	85	115	115	10.0	1.63%
o-Xylene	4.948	0.50	5.00	0	99.0%	85	115	115	5.02	1.56%
Cis-1,2-Dichloroethylene	1.15	0.10	1.00	0	115%	85	115	115	1.04	10.1%
Sample ID	LCS-05375	Batch ID:	R35277	Test Code:	TPHCGW	Units:	µg/L	Analysis Date	6/8/05 4:16:05 PM	Prep Date
Client ID:			Run ID:	ORGCB_0506008A				SeqNo:	509692	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD
TPHC Gas (C6-C14)	543.6	50	500	0	110%	81	126	126	0	0

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

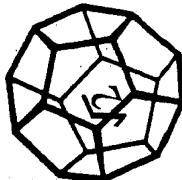
B - Analyte detected in the associated Method Blank

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 050609  
**Project:** 097309, Blue Lake Belting and Leather

**QC SUMMARY REPORT**  
Laboratory Control Spike Duplicate

Sample ID	Batch ID:	Test Code:	Units:	Analysis Date	Prep Date
Client ID:		Run ID:	µg/L		
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec
TPHC Gas (C6-C14)	548.2	50	500	0	110%

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits  
J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits  
I - Incomplete or Invalid Data      B - Analyte detected in the associated Method/Blank



**NORTH COAST  
LABORATORIES LTD.**

680 West End Road • Arcata • CA 95521-9202  
707-822-4649 Fax 707-822-6831

## **Chain of Custody**

0506009  
baggs

Attention: <u>Mike Fuget</u>	Results & Invoice to: <u>SHN</u>
Address: <u>812 West Wabash Avenue</u>	Eureka, CA 95501
Phone: <u>441-8855</u>	Copies of Report to:
Sampler (Sign & Print): <u>David P. Laine</u> <u>David P. Laine</u>	
<b>PROJECT INFORMATION</b>	
Project Number: <u>097309</u>	Project Name: <u>Blue Lake Belting and Leather</u>
Purchase Order Number: _____	

LAB ID	SAMPLE ID	DATE	TIME	MATRIX
	MW - 106	6/11/05	1140	GW
	MW - 101		1215	
	MW - 102		1250	
	MW - 105		1325	
	MW - 103		1400	
	MW - 3		1450	
	MW - 104		1500	

<b>LABORATORY NUMBER:</b>		TAT: <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 5 Day <input type="checkbox"/> 5-7 Day	
STD (2-3 Wk) <input type="checkbox"/> Other: _____		PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES	
<b>REPORTING REQUIREMENTS:</b>	State Forms <input type="checkbox"/>		
Preliminary: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> By: _____ / _____ / _____			
Final Report: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> By: _____ / _____ / _____			
<b>CONTAINER CODES:</b> 1—1/2 gal. pt; 2—250 ml pt; 3—500 ml pt; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other			
<b>PRESERVATIVE CODES:</b> a—HNO <sub>3</sub> ; b—HCl; c—H <sub>2</sub> SO <sub>4</sub> ; d—Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ; e—NaOH; f—C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Cl; g—other			
<b>SAMPLE CONDITION/SPECIAL INSTRUCTIONS</b>			
EDF			
Global ID# T0602300012			
No MTBE on repeat			
Temp = 14.4°C			
<b>SAMPLE DISPOSAL</b> <input checked="" type="checkbox"/> NCL Disposal of Non-Contaminated <input type="checkbox"/> Return			
<b>CHAIN OF CUSTODY SEALS Y/N/NA</b> <b>SHIPPED VIA:</b> UPS Air-Ex Fed-Ex Bus Hand			

\***MATRIX:** DW=Drinking Water; Eff=Effluent; Infl=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.